

NORTHAMPTONSHIRE COUNTY COUNCIL



# Annual Report

OF THE

MEDICAL OFFICER  
OF HEALTH

FOR THE YEAR

1937





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## Public Health Officers of the Authority.

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### (a) Whole-time Officers of the County Council.

#### *County Medical Officer of Health—*

C. M. SMITH, M.A., M.D., Ch.B., D.P.H. (from 9th August, 1937).

#### *Deputy—*

J. H. CRANE, M.B.E., B.A., M.D., Ch.B., B.A.O., D.P.H.

#### *Assistants—*

H. ROGER, M.A., M.B., Ch.B., D.P.H. (Senior Assistant) (until 19th August, 1937).  
 LILA S. GREIG, M.B., Ch.B., D.P.H. (Maternity and Child Welfare) (until 22nd July, 1937).  
 IVOR J. JONES, M.B., B.S., D.P.H.  
 J. A. ROUGHEAD, M.D., Ch.B., D.P.H.  
 T. O. GARLAND, M.A., M.D., Ch.B., D.P.H. (temporary from 14th June, 1937).

#### *Clinical Tuberculosis Officer—*

G. B. LORD, M.D., Ch.B.

#### *County Mental Hospital, Berrywood ;*

##### *Resident Medical Superintendent—*

E. D. T. HAYES, B.A., M.D., Ch.B., D.P.M.

##### *Deputy Medical Superintendent—*

JOSHUA CARSE, M.D., B.S., D.P.M.

##### *Assistant Medical Officers—*

F. A. FRANK, M.B., Ch.B., D.P.M.  
 R. W. MAXWELL, M.R.C.S., L.R.C.P., D.P.M.  
 J. A. KILPATRICK, M.B., Ch.B.

#### *Rushden House Sanatorium ;*

##### *Resident Medical Superintendent—*

DR. J. H. CRANE.

##### *Assistant Resident Medical Superintendent—*

K. H. HENRY, M.B., Ch.B., B.A.O. (from 7th Sept., 1937, to 23rd December, 1937).

#### *School Medical Officers—*

DR. C. M. SMITH.  
 J. PERRY WALKER, M.B., Ch.B. (Senior Assistant).  
 META J. NEWTON, M.B., Ch.B.  
 DR. I. J. JONES.  
 DR. H. ROGER.  
 DR. J. A. ROUGHEAD.  
 DR. T. O. GARLAND.

*School Oculist—*

DR. J. PERRY WALKER.

*Dental Surgeons (School)—*

P. B. CAMPION, L.D.S., R.C.S. (Senior Dentist).

MISS M. D. HOOPER, L.D.S.

A. J. C. MCINTOSH, L.D.S.

G. MOODY, L.D.S.

J. G. JONES, L.D.S.

MISS M. C. MORRISON, L.D.S., R.C.S.

*Food and Drugs (Adulteration) Act.**Chief Inspector—*

F. CAULTON (until 30th Sept., 1937).

A. E. WALLER (from 1st October, 1937).

*Superintendent Health Visitor—*

MISS A. E. ROBINSON.

*County Health Visitors—*

MISS M. E. WHITEHOUSE.

MISS F. M. SHARPE.

MISS S. L. WILKINS.

MISS M. H. PANTON.

MISS S. J. DEVERS.

MISS M. H. MEADLEY.

MRS. E. FORD (temporary).

MISS D. B. PREWETT.

MISS G. B. B. MILLGATE.

MISS R. H. CROMPTON.

MISS M. M. C. MILNE.

MISS K. P. GREEN.

MISS M. A. CLARK.

MISS S. H. BUCHANAN.

MISS L. H. WAUGH.

MISS M. I. CHARLTON.

MISS D. M. BATES (until 28th July, 1937).

MISS M. W. DODD.

MISS M. K. DONAGHEY (until 28th August, 1937).

MISS E. MYERSCOUGH (from 24th May, 1937).

MISS H. M. ROSSER (from 11th October, 1937).

MISS C. M. WHEATLEY (from 18th October, 1937).

MISS M. IRONS (from 29th November, 1937).

*Matron of Rushden House (Tuberculosis) Sanatorium—*

MISS H. WILLIAMS.

*Tuberculosis Nurse—*

MISS M. E. DASHWOOD (until 3rd November, 1937).

*Mental Welfare Worker—*

MISS K. M. HOBBS.

*Assistant Bacteriologist—*

MISS M. P. SMITH.



*Clerical Staff—*

T. MOSSEY (Chief Clerk).  
 P. J. CHAMBERLAIN.  
 S. E. BIERTON.  
 R. J. BRUCE.  
 E. PRIOR.  
 S. HARRIS, Cert. S.I.B.  
 P. H. J. WILKINSON.  
 J. A. MUNTON (from 1st June, 1937).

**(b) Part-time Officers of the Authority and others discharging duties for the Authority.***Consulting Obstetrician.*

R. WATSON, F.R.C.S. (Edin.), M.C.O.G., The Avenue, Cliftonville, Northampton (Telephone, 3103).

*Inspector of Midwives.*

MISS E. M. CROCKER, County Superintendent and Secretary, Northamptonshire Nursing Association, Guildhall Road, Northampton (Telephone, 850).

The following changes have taken place since the issue of the Annual Report for 1936 :—

*District Medical Officer of Health.***Borough of Higham Ferrers—**

DR. T. O. GARLAND (Temporary Assistant Medical Officer), Northampton, from 11th May, 1937, *vice* A. W. STOPFORD THOMPSON, M.B., Ch.B., D.P.H., resigned.

*District Medical Officer under Poor Law Acts.***Oundle Guardians' Area—**

T. E. SKINNER, M.R.C.S., L.R.C.P., Kings Cliffe, from 21st October, 1937, for the parishes of Apethorpe, Blatherwycke, Bulwick, Collyweston, Deene, Deenethorpe, Duddington, Easton-on-the-Hill, Fineshade, Harringworth, Kings Cliffe, Laxton, Nassington, Wakerley, Woodnewton and Yarwell, *vice* E. C. Whitehead, M.B., resigned.

*Public Vaccinator.***Oundle Guardians' Area—**

DR. T. E. SKINNER, Kings Cliffe, from 21st October, 1937, for the parishes enumerated above, *vice* Dr. E. C. Whitehead, resigned.

# NORTHAMPTONSHIRE COUNTY COUNCIL,

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COUNTY HEALTH DEPARTMENT,  
GUILDHALL ROAD,  
NORTHAMPTON.

JUNE, 1938.

*To the Chairman and members of the Northamptonshire County Council.*

MR. CHAIRMAN, MY LORDS, LADIES AND GENTLEMEN,

I have the honour to present the Forty-first Annual Report of the County Medical Officer of Health, for the year 1937.

The vital statistics for the year are satisfactory. The County, however, did not escape the influenza epidemic which visited most parts of the Country in the early weeks of the year, and the deaths registered as due to this infection numbered 109. Apart from influenza there was no unusual prevalence of communicable disease.

It is with pleasure that I record low rates for both infant mortality and maternal mortality.

The outstanding feature of the year's work was the inauguration of the scheme under the Midwives Act, 1936, to secure an adequate domiciliary midwifery service throughout the County. The arrangements for giving effect to the scheme which is carried out entirely by the County Nursing Association and by the District Nursing Associations as the agents of the Local Supervising Authority are described in the report. The new midwifery service constitutes an event of signal importance in the history of the Maternity Services of the County.

I have the honour to be,

Your obedient Servant,

CHARLES MILLIKEN SMITH,  
*County Medical Officer of Health.*



## SECTION A.

### Statistics and Social Conditions.

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#### 1(a). GENERAL STATISTICS FOR THE YEAR.

Area of the Administrative County .....	*578,947 acres
Population (Census 1921) .....	211,509
(Census 1931) .....	217,133
(Estimated resident, middle of 1937) .....	220,400
Number of inhabited houses (Census 1921) .....	50,538
(Census 1931) .....	57,047
Number of families or separate occupiers (Census 1921) .....	52,286
(Census 1931) .....	58,964
Rateable Value (April 1st, 1937) .....	£1,099,056
Actual produce of a penny rate 1936-1937 (whole area) .....	£4,244 0 11

\* Subsequent to the extension of the boundaries of the County Borough of Northampton, on April 1st, 1932.

#### 1(b). VITAL STATISTICS.

	TOTAL	MALE	FEMALE	BIRTH-RATE
Live births (Legitimate) .....	2,992	1,544	1,448	} 14.08
„    „ (Illegitimate) .....	112	52	60	
				<i>Rate per 1,000</i>
				<i>Total (Live and</i>
				<i>Still) Births.</i>
Still-births .....	111	65	46	34.52

				DEATH-RATE
Deaths .....	2,689	1,399	1,290	12.20†

*Rate per 1,000*  
*Total (Live and*  
*Deaths. Still) Births.*

Deaths from puerperal causes :—

Puerperal sepsis .....	2	0.62
Other puerperal causes .....	5	1.55
Total .....	7	2.17

† See next page.

Death-rate of infants under one year of age :—

All infants per 1,000 live births .....	43.81
Legitimate infants per 1,000 legitimate live births.....	41.77
Illegitimate infants per 1,000 illegitimate live births .....	98.21
Deaths from (a) Cancer (all ages) .....	345
(b) Measles (all ages) .....	1
(c) Whooping Cough (all ages) .....	8
(d) Diarrhoea (under 2 years of age) .....	6

As compared with the year 1936, the birth-rate is higher by .08 per 1,000 of the population, and the death-rate is lower by .02.

The birth-rate exceeded the death-rate by 1.88 per 1,000 of the population.

The seven chief causes of death accounted for 63.3 per cent of the total deaths, and are led by heart disease (25.7 per cent.), cancer (12.8 per cent.), cerebral haemorrhage (6.3 per cent.), other circulatory diseases (5.4 per cent.), senility (5.2 per cent.), influenza (4.0 per cent.), violence (3.9 per cent.). The first three causes of death occupy the same relative positions as in the year 1936, and the second three take the places of senility, other circulatory diseases and congenital debility, respectively ; violence occupies the same position as in the year 1936.

The number of deaths associated with childbirth is lower than in the year 1936, and the infant mortality rate is only 1.81 per 1,000 births higher than the lowest rate recorded in the County—42 per 1,000 in 1933. The illegitimate infant mortality rate is the highest rate recorded since 1933, but the figures on which it is calculated—11 deaths among 112 illegitimate infants—are small, and 5 less deaths would have reduced the rate almost by half.

†*Nett Death-Rate.*

Comparability Factors for each Urban and Rural District, and for the Administrative County as a whole, have been issued by the Registrar-General for adjusting the local death-rates for the purposes of comparison with recent years and with the crude death-rate for England and Wales.

The factor in each case may be said to represent the population handicap to be applied to the area, and, when multiplied by the crude death-rate experienced in the area, modifies the latter so as to make it comparable with the crude death-rate for the country as a whole, or with the similarly adjusted death-rate for any other area.

The factor for the Administrative County is 0.87, and this gives a nett County death-rate of 10.6, as against a crude death-rate of 12.2, and as against 12.4 for England and Wales. This death-rate of 10.6 is the rate which, it is assumed, would be arrived at if the age and sex constitution of the population of Northamptonshire was distributed in the same proportion as that of England and Wales as a whole.

## 2. AREA AND POPULATION.

There has been no change in the area of the Administrative County during the year 1937, but the population has increased by 2,800 on that of the year 1936.

## SECTION B.

### General Provision of Health Services.

#### 1. LABORATORY FACILITIES.

General laboratory facilities, including Wassermann tests, are available at the Pathological Department of Northampton General Hospital.

The County Laboratory, which is equipped for the examinations required by the Tuberculosis Officer, and for investigations in connection with milk supplies, water, pollution of streams, etc., is situated temporarily at 40, Guildhall Road, Northampton. A whole-time Assistant Bacteriologist is employed who also carries out inspections of dairy farms under the Milk (Special Designations) Order, 1936.

The following is a synopsis of the work done in the Laboratory during 1937 (owing to changes in the technique of milk examination referred to later, it was not possible to carry out much work during the month of January) :—

No. of milk samples examined (bacteriologically) .....	2,295
No. of water samples examined (bacteriologically).....	116
No. of water samples examined (chemically) .....	12
No. of water samples examined (oxygen absorbed test) .....	6
	<hr/>
	2,429
	<hr/>

The totals for the years 1933-6 were, 459, 760, 1,491 and 1,533, respectively.

#### MILK.

The 2,295 samples of milk may be classified as follows :—

Graded milks.....	770
Non-designated milks .....	1,465
Pasteurised milks .....	21
School milks .....	39
	<hr/>
	2,295
	<hr/>

#### Graded Milks.

Under the Milk (Special Designations) Order, 1936, the methylene blue reduction test replaced the bacterial plate count as the official test for graded raw milks, *viz.* : Tuberculin Tested Milk and Accredited Milk, as from 1st January, 1937, the coliform test being retained for occasional use.

The official standard for both grades is that a sample taken at any date from the 1st May to the 31st October shall be regarded as satisfying the methylene blue reduction test if it fails to decolourise the methylene blue in 4½ hours, and a sample taken at any date from the 1st November to the 30th April shall be regarded as satisfying the test if it fails to decolourise the methylene blue in 5½ hours.

After several months working, the Kettering Rural District Council wrote to the County Council stating that in their opinion the methylene blue test was unsatisfactory, and asking that the bacterial plate count method should be reverted to. As the views stated by the Kettering Rural District Council were known to be shared in other parts of the County, I prepared a



memorandum on the subject, which was circulated to members of the County Council. It is also reprinted below since the results of the methylene blue test in practice have attracted considerable attention.

### **Comparison of Methylene Blue Reduction Test and Bacterial Plate Count Method.**

The methylene blue test was prescribed in the Milk (Special Designations) Order, 1936, in preference to the bacterial plate count as the result of special research on the bacteriological grading of milk carried out over a period of three years by Professor G. S. Wilson and other workers at the London School of Hygiene and Tropical Medicine. Professor Wilson's report was published by the Medical Research Council in 1935 ; in the preface to the report, which bears the imprimatur of the Medical Research Council, the following statement occurs :—

“ The two methods which have hitherto been mainly used in grading milk for cleanliness, namely, the plate count and the coliform count, are neither of them entirely suitable. Both methods have a large experimental error, and the plate count in particular, in addition to being complex and expensive, gives an appearance of accuracy which is entirely fictitious and misleading. The value of the coliform count in the examination of water is well attested by years of experience, but the fundamental assumptions on which its interpretation is based do not hold true for milk.”

The description and comparison of the two tests which follow have been extracted from Professor Wilson's report :—

#### **DESCRIPTION AND RATIONALE OF THE TESTS.**

##### **Methylene Blue Test.**

The methylene blue test purports to give an indication of the degree of bacterial activity in the milk. The method consists of adding 1 c.c. of methylene blue solution to 10 c.c. of milk and heating in a water bath from which light is excluded at 37° C. for 4½ to 5½ hours ; at the end of every half hour the test tubes are inverted to ensure mixing of the contents. The test depends upon the fact that the micro-organisms in the milk act by absorbing the dissolved oxygen thus allowing the natural reducing system of the milk to function, with the result that the methylene blue solution is decolourized. The greater the number of living bacteria in the milk the more rapidly is the oxygen used up, and the shorter the time within which the methylene blue solution is decolourized. The test thus affords an index of the degree of bacterial activity. The standards used in the official test are that decolourization must not occur within 4½ hours in summer (1st May to 31st October) and 5½ hours in winter (1st November to 30th April). A sample in which decolourization is noted within these periods is reported as having failed to satisfy the test.

##### **Bacterial Plate Count Method.**

The test is an attempt to measure the number of micro-organisms in a sample of milk. Dilutions of 1/10, 1/100 and 1/1000 are prepared and 1 c.c. of each dilution placed on a Petri dish. 10 c.c. of milk agar, a nutrient material in which germs grow easily, are added, and the plates are kept in an incubator for 48 hours at 37° C. Each germ, or clump of germs, grows into a colony of germs, some of which are large enough to be seen with the naked eye aided by a magnifying-glass. The number of colonies seen are counted and after making a simple calculation the examiner can report the number of germs in one c.c. of the sample.

#### **ACCURACY AND RELIABILITY.**

The methylene blue test is reliable. If the proper technique is observed there should be less than two per cent. variation in the results of different workers on the same samples.

The bacterial plate count method is neither accurate nor reliable. The fact that a sample is reported on as containing a specified number of micro-organisms per c.c. is highly misleading. As a matter of fact Professor Wilson has shown that the bacterial plate count has an experimental error of  $\pm 90\%$ , which means, for example, that in a sample reported as containing 300,000 micro-organisms per c.c. the number of germs present might have been anything from 30,000 to 570,000 per c.c. The main reasons why the test is so unreliable are :—

- (a) The effect of clumping. “ Many of the bacteria are distributed not individually but in chains and groups of varying sizes. The colonies developing on the plates are derived, therefore, not solely from individual organisms but also from clumps containing varying numbers of organisms.” The average number of germs per clump may vary from one milk to another, and also in different samples of the same milk, so it will be apparent that the number of colonies which grow bears little relationship to the number of micro-organisms originally present. Further, during dilution of the sample, the clumps may break up, but this takes place to an extent which is “ variable and uncontrollable, leading in extreme instances to errors of 1,000%.”
- (b) The large number of different types of germs in milk “ renders it impossible to devise a nutrient material that will be favourable under any given set of conditions for the development of all organisms ” ; that is to say, the number of germs which will grow into colonies large enough to be seen depends upon the types of germs which are present, for some types grow more readily than others.
- (c) “ Variations in temperature within the same incubator which lead to differential development or inhibition of different groups of organisms.” Very slight variations in temperature will promote or diminish the growth of different types of germs.
- (d) The extraordinary difficulty of counting colonies of a size round about or below the limit at which they can be seen by the naked eye. In counting the colonies, the plates should be placed on a specially constructed illuminated box and a hand magnifying glass should be used.
- (e) “ The differences due to personal bias and personal variability observed between different workers when counting identical plates illuminated under optimal conditions ” ; the reason for this is apparent from what has been said under (d).
- (f) “ The differences in working accuracies of different workers which are operative at every one of the numerous stages of the technique of the plate count.”

#### EASE WITH WHICH THE TESTS ARE PERFORMED.

The methylene blue test is simple and can be carried out by workers who have had no previous training in bacteriology. The instructions for carrying out the test which have been carefully and fully explained in Memorandum 139/Foods (1937), can be followed by any intelligent worker.

The bacterial plate count method is difficult to standardize as regards technique, and should only be undertaken by persons with training in bacteriology.

#### COST.

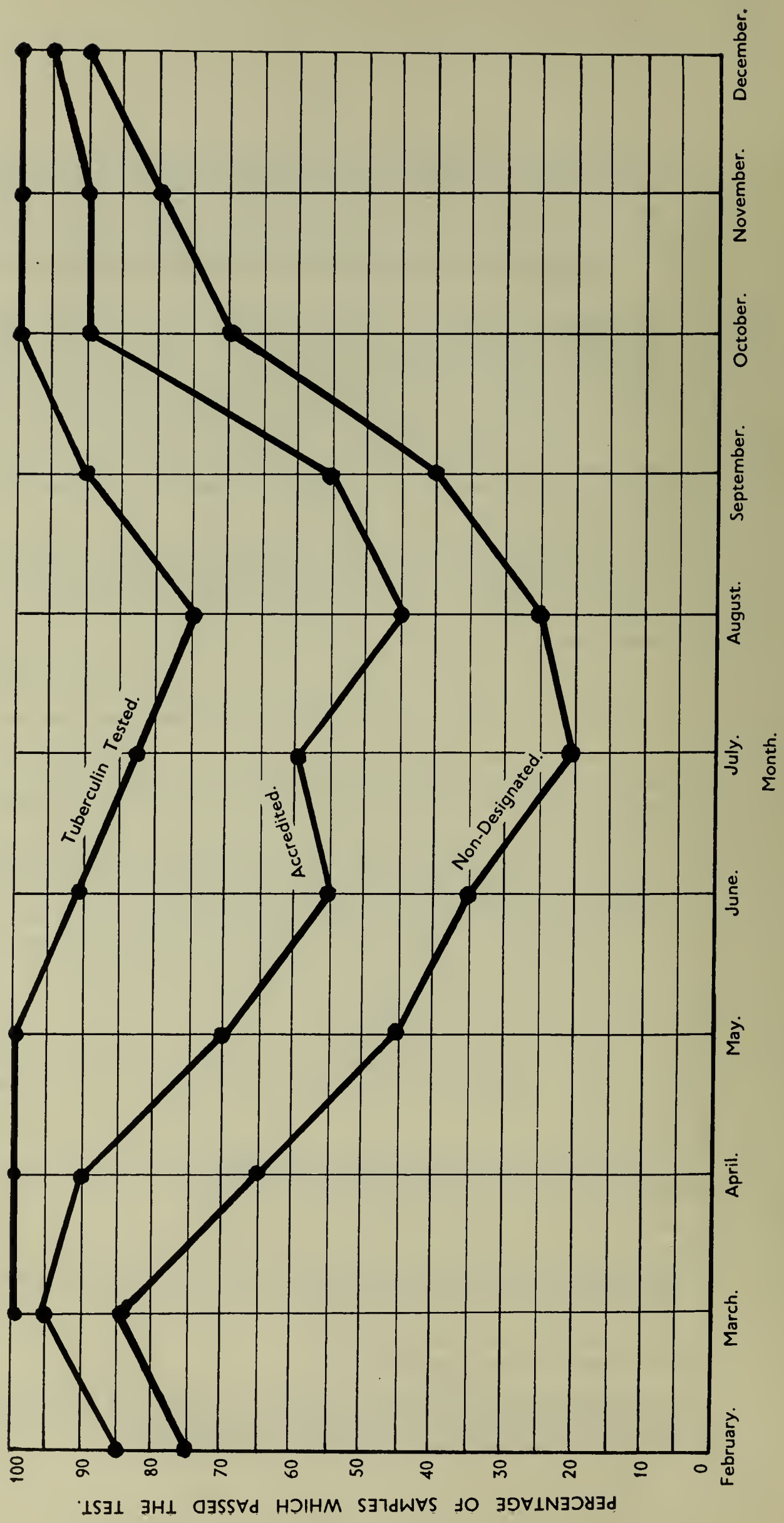
The methylene blue test can be performed cheaply and quickly, so that the milk from herds of individual producers can be sampled frequently.

The bacterial plate count method is expensive to carry out, and there is a delay of at least two days before the result can be ascertained.

It is important to note that Professor Wilson states that no producer should be condemned on the result of a single sample, but recommends that samples should be taken frequently and that 75% of the samples collected should reach the required standard.

NORTHAMPTONSHIRE COUNTY COUNCIL.

EXAMINATION OF MILK SAMPLES BY METHYLENE BLUE REDUCTION TEST, 1937.





# RESULTS OF EXAMINATION OF GRADED AND NON-GRADED MILK BY METHYLENE BLUE TEST IN NORTHAMPTONSHIRE.

The chart on opposite page shows the percentage of samples of Tuberculin Tested, Accredited and of non-designated milks which satisfied the methylene blue test during the period February to December, 1937. From the chart it will be seen, as might be expected, that the results of Tuberculin Tested samples are superior to those of Accredited samples, which in turn are better than the results of non-designated milk. These results are obviously consistent with what is known regarding the varying standards in methods of production among the three groups of producers. Tuberculin Tested milk producers have apparently little or no difficulty in complying with the prescribed standard. Accredited milks are liable during the summer months to fall considerably below the recommended limit of 75% satisfactory samples, and for this two explanations are possible. Either the test is too severe during the summer, or at this season producers fail to attain a reasonable standard of cleanliness. It is well known that the bacterial content of milk, other things being equal, depends more on atmospheric temperature than on any other factor. The same methods of production which will yield a reasonably clean milk in winter, may result in a very unsatisfactory sample in summer. Regarding the possibility that the standards of the methylene blue test may be too stringent under summer conditions, reference should be made to the fact that Professor Wilson suggested certain standards as the result of the examination of 360 samples of milk collected at three different periods of the year from farms in the neighbouring County of Buckinghamshire. A few of the farms produced milk of tuberculin tested standard, many of them were accredited standard, but the majority took "no very special care over production with the result that, unless the atmospheric temperature was low, the bacterial content of the milk at the time of examination was fairly high." In fixing his standards Professor Wilson took the time within which 50% of the Buckinghamshire samples decolourized methylene blue solution. The recommended standards thus arrived at were as follows: In summer, failure to decolourize within  $5\frac{1}{2}$  hours, and in winter, failure to decolourize within  $6\frac{1}{2}$  hours.

The standards officially prescribed by the Ministry of Health are failure to decolourize within  $4\frac{1}{2}$  hours in summer and  $5\frac{1}{2}$  hours in winter, which are less severe than those suggested by Professor Wilson. A prominent feature revealed by the graphs is the wide discrepancy between the number of satisfactory samples of Accredited and of non-designated milks in summer as compared with winter. If the methylene blue test is too severe during warm weather, then it might equally well be maintained that it is too lenient when low atmospheric temperatures prevail.

## SUMMARY.

Finally, from the work which has been published by the Medical Research Council, it appears that the methylene blue test which is simple and inexpensive to perform, with a very small experimental error, is well adapted for the examination of all raw milk, gives a good indication of the keeping quality of the milk, and affords a very fair index of the cleanliness of its production. The plate count method, on the other hand, which is a complex expensive test, with a very high experimental error, can be carried out only by relatively skilled workers and seems to afford no better index of the cleanliness of production or keeping quality of the milk than does the reduction test.

The results of further experience with the methylene blue test will no doubt reveal defects, because it would be idle to pretend that in the search for an ideal test the methylene blue method represented finality. The evidence at present available makes it clear, however, that the methylene blue test is preferable to the plate count.

In view of the foregoing considerations, there would seem to be no justification for reverting to the plate count for the examination of non-designated milk.

The figures from which the data for this chart were derived are set out below in table form :—

SAMPLES EXAMINED DURING THE YEAR 1937 BY THE  
METHYLENE BLUE REDUCTION TEST.

MONTH	NON-DESIGNATED			ACCREDITED			TUBERCULIN TESTED			TOTAL SAMPLES
	Satis- factory	Not Satis- factory	Per- centage Satis- factory	Satis- factory	Not Satis- factory	Per- centage Satis- factory	Satis- factory	Not Satis- factory	Per- centage Satis- factory	
February	110	35	75	17	3	85	—	—	—	165
March	104	21	83	28	1	96	10	—	100	164
April	113	61	65	42	4	91	17	—	100	237
May	59	74	44	40	15	72	9	—	100	197
June	67	111	37	30	22	57	23	2	92	255
July	27	112	20	21	15	58	19	4	83	198
August	20	59	25	27	34	44	21	7	75	168
September	28	45	38	23	19	54	9	1	90	125
October	88	39	69	65	7	90	14	—	100	213
November	99	30	77	71	8	90	13	—	100	221
December	141	11	92	88	2	97	20	—	100	262
TOTAL	856	598	58	452	130	77	155	14	91	2205

In addition to the 2,205 examinations included in the above table, 90 other samples were also examined, these being samples of (a) pasteurised milk, (b) school milk, and (c) graded milk, examined in January by the coliform test only.

The 169 samples of Tuberculin Tested Milk were taken by District Sanitary Inspectors on behalf of this Authority and the 601 samples of Accredited Milk (including 19 samples taken during January and examined by the coliform test only) were taken by the District Medical Officers on the County Council staff and the Assistant Bacteriologist.

Samples of Tuberculin Tested Milk are taken twice monthly during July, August and September, and once monthly during the remainder of the year, whilst efforts are made to arrange for Accredited Producers to be inspected quarterly, but as will be seen the average number of visits actually made during the year was only just over two.

Due to the increased number of licences granted to produce designated milk difficulty was experienced in arranging the greater number of inspections required. In December, this subject was reported to the Public Health, Housing, Maternity and Child Welfare Committee with a recommendation for the appointment of additional staff. The recommendation was adopted but the officer appointed did not begin duty until after the end of the year.

In the case of unsatisfactory samples, further inspections are carried out and efforts are made to find the fault in the methods of production or handling.

#### NON-DESIGNATED MILKS.

Of the 1,465 samples in this group, 1,393 were submitted by Sanitary Inspectors of District Councils, and the remainder (72) were taken from applicants for licences to produce graded milk. There is no statutory test for cleanliness of non-designated milk and in its absence the standards used in this County were, for the first eight months of the year under review, those prescribed in the Milk (Special Designations) Order, 1936, for Accredited Milk. There were, however, some misgivings among Sanitary Inspectors throughout the County as to the advisability of classifying as "Bad" all samples which failed to pass the test for Accredited



Milk, and a request was received from one of the Joint Dairies Committees that there should be some differentiation within this category. After careful consideration and reference to the Medical Research Council's Report on the Bacteriological Grading of Milk, I agreed to make an intermediate grade for use in classifying non-designated milks. The three categories used are set out below :—

*Good*.—Samples which satisfy the methylene blue reduction test for Accredited milk.

The prescribed standard is "a sample taken at any date from 1st May to the 31st October shall be regarded as satisfying the methylene blue reduction test if it fails to decolourise the methylene blue in  $4\frac{1}{2}$  hours and a sample taken at any date from the 1st November to the 30th April shall be regarded as satisfying the test if it fails to decolourise the methylene blue in  $5\frac{1}{2}$  hours."

*Moderate*.—Samples which in Summer (from 1st May to 31st October) fail to decolourise methylene blue in less than 3 hours but decolourise methylene blue within 3 to  $4\frac{1}{2}$  hours.

Samples which in Winter (1st November to 30th April) fail to decolourise methylene blue in less than 4 hours but decolourise methylene blue within 4 to  $5\frac{1}{2}$  hours.

*Bad*.—Samples which in Summer decolourise methylene blue in less than 3 hours.

Samples which in Winter decolourise methylene blue in less than 4 hours.

In making the above classification, the results of tests for coliform organisms are taken into consideration, when these tests are performed. The presence of coliform organisms in 1/100 ml. of the milk places the sample one category lower than it would be as a result of the methylene blue reduction test alone.

Although it was not until September, 1937, that the designation "Moderate" was used, it is thought advisable, for the purposes of comparison with other years, to classify all samples submitted by District Councils as "Good," "Moderate," or "Bad." The standards used in previous years, when samples were examined by the plate count method and coliform test, are set out at the foot of this page.

	1937		1936		1935		1934	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
GOOD	808	58.0	656	72.2	647	76.9	426	62.3
MODERATE	196	14.0	191	21.0	148	17.6	140	20.5
BAD	389	28.0	62	6.8	46	5.5	118	17.2
TOTALS	1393	—	909	—	841	—	684	—

It will be seen that the percentage of "Good" samples fell considerably (from 72.2 to 58.0) as compared with the year 1936, whilst the percentage of samples classed as "Moderate" and "Bad" increased, the latter being four times as large as in the year 1936. If reference is made to the table on page 14, however, it will be noted that 401 out of 598 unsatisfactory samples were examined during the five months May, June, July, August, and September.

#### BACTERIAL PLATE COUNT AND COLIFORM TEST.

The standards used were as follows :—

GOOD. Milk of Grade A. standard, *i.e.*, containing not more than 200,000 organisms per 1 c.c. and no coliform bacillus in 1/100 c.c.

MODERATE. Milk containing not more than 500,000 organisms per 1 c.c. and no coliform bacillus in 1/1000 c.c.

BAD. Milk containing over 500,000 organisms per 1 c.c. and coliform bacilli in 1/100 c.c. or milk containing more than 1,000,000 organisms per 1 c.c.

Our first year's experience of the methylene blue reduction test shows that in the summer months the proportion of samples of non-designated milk passing the test is smaller than in former years when the plate count method was employed.

Of the 72 samples of milk submitted by or taken from applicants for Accredited or Tuberculin Tested licences, 58 (or 80.6%) were satisfactory, and 14 (or 19.4%) were unsatisfactory. It should be noted that 11 of these samples were examined by the coliform test only, during January, 1937.

**Pasteurised Milks.**

Pasteurised milk is still examined by the plate count method, the standard being that a sample taken at any time before delivery to the consumer should not contain more than 100,000 bacteria per millilitre.

Of the 21 samples submitted (by District Councils) during the year, 19 (or 90.5%) were up to the required standard, one was just below, and the other was definitely "Bad."

**School Milks.**

Of the 39 samples of milk taken from supplies to school children, 20 were pasteurised milk. A comparison with previous years is given below :—

	1937		1936		1935	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
GOOD .....	34	87.25	14	46.7	31	70.5
MODERATE	1	2.5	9	30.0	7	15.9
BAD .....	4	10.25	7	23.3	6	13.6

**WATER.**

The number of samples of water examined, bacteriologically and chemically, increased to 128, as against 89 in the year 1936.

The samples were submitted by District Councils, and by Engineers engaged in investigating new water resources of various Rural Districts. In addition, 7 samples of School water supplies were examined.

The six samples of water examined by "oxygen absorbed test" were taken in connection with the twice-yearly Survey of the Rivers Avon and Arrow, carried out under the auspices of the Ministry of Agriculture and Fisheries. Other samples taken in connection with this Survey are sent to the Government Chemist, who reports on them direct to the Ministry of Agriculture and Fisheries.

**2. PUBLIC ASSISTANCE INSTITUTIONS.**

The pressure upon accommodation for the sick at the public assistance institutions has been continuous, and, with the exception of the Oundle Institution, considerable difficulty has been experienced in providing for the increasing number of admissions.

During the year, however, good progress has been made with the schemes for increasing the accommodation, and the pressure should soon be somewhat relieved.

At Wellingborough, the additional nurses' home, to accommodate twelve nurses, was opened in the autumn, while the new sick block, to be called the Castle Home of Rest, was almost completed by the end of the year. This block, which will contain 65 beds, is a two-storey brick building of modern design, and provides a high standard of accommodation. It is to be occupied by female patients who will be transferred from the old female infirmary; the latter building will then be occupied by males, and, as it is in close proximity to the male

infirmery, administration will be facilitated. The extreme pressure upon male accommodation, which necessitated a number of male sick sleeping in house wards, will thus be overcome.

Upon the occupation of the Castle Home of Rest the overcrowding of beds in the other parts of the institution will cease, and the following numbers of patients can be received :

FEMALE SICK.			
Home of Rest .....	47		
Castle Home of Rest .....	65		
Isolation Block .....	12		
	—		124
MALE SICK.			
Male Infirmary .....	50		
Former Female Infirmary .....	50		
	—		100

At Kettering, satisfactory progress was made with the maternity block (10 beds and 2 isolation beds) and with the extensions to the Nurses' Home, which will then accommodate an additional 22 nurses with two maids.

It is at Daventry, however, that the greatest pressure has been experienced. It is worthy of note that throughout the year the inmates averaged about 40 more than in the previous year, and the accommodation was severely taxed even during the summer months. In the autumn, some six acres of land adjoining the Institution were purchased, and consideration was given to the question of increasing the hospital block (opened June, 1934) by 40 beds. At the same time the opportunity will be taken to provide additional day room accommodation, storage for linen, and, it is hoped, a dining-room.

During the year considerable difficulty was experienced in maintaining adequate nursing services in the various institutions.

The recruitment of suitable personnel to tend the chronic sick presents its own difficulties, and is only part of the general problem of shortage of nurses which has now become a subject of major public health importance.

### 3. MENTAL DEFICIENCY.

The number of ascertained cases on the Register at the end of the year was 387.

In Certified Institutions :	<i>Males</i>	<i>Females</i>	<i>Total</i>
Stoke Park Colony .....	13	9	22
Whittington Hall .....	—	4	4
Besford Court .....	3	—	3
St. Mary's, Alton .....	—	3	3
Barkingside .....	—	1	1
Earlswood .....	—	1	1
Bromham House .....	9	—	9
Kettering Public Assistance Institution	3	11	14
Wellingborough Public Assistance Institution .....	5	14	19
State Institutions .....	5	7	12
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On Licence from Institutions .....	1	6	7
<hr/>			
Cases under Guardianship .....	5	2	7
On Licence from Guardianship .....	2	1	3
<hr/>			
Cases under Statutory Supervision .....	62	51	113
Cases under Voluntary Supervision .....	108	61	169
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			TOTAL 387
			<hr/>



**Ascertainment.**

The work of ascertainment has continued throughout the year. The County Education Authority referred 10 cases, 4 cases were referred by the Kettering Education Authority, and 17 have been ascertained through the staffs of the Public Health and Public Assistance Authorities.

The ascertainment rate is 2.02 per thousand population. The number of Orders made under the Mental Deficiency Acts during the year was nine. Orders relating to three defectives lapsed by operation of the law during 1937, and three other defectives detained under Orders have died.

**Guardianship.**

The Brighton Guardianship Society has continued the supervision of the eight defectives in the care of guardians, and from the monthly reports received from the Society each defective would appear to be well cared for and happy.

Two other defectives have been placed under guardianship in the county during the year, one being under the guardianship of his mother and the other under the guardianship of a farmer with whom he is doing useful work. These cases are visited regularly by one of the Assistant Medical Officers as well as by the Mental Welfare Officer.

**Medical Examinations.**

Fifty-four medical examinations by Assistant Medical Officers have been carried out during the year.

**Institutional Accommodation—Bromham House.**

The erection by the Bedfordshire and Northamptonshire Joint Board for the Mentally Defective of the Colony for mental defectives at Bromham House near Bedford to the extent necessary to enable it to accommodate 260 patients was almost completed by the end of the year, and it is anticipated that the admission of patients will commence early in 1938.

The accommodation to be provided is as follows :—

Block of 60 beds for adult males of high and medium grades between the ages of 16 and 40 years.

Block of 50 beds for boys of high and medium grades up to the age of 16 years.

Block of 50 beds for adult females of high grade between the ages of 16 and 40 years.

Block of 50 beds for females of medium grade between the ages of 16 and 40 years.

Block of 50 beds for girls of high and medium grades up to the age of 16 years.

Under the Scheme for the constitution of the Joint Board the Northamptonshire County Council will be entitled to 106 of the beds in question.

**Domiciliary Supervision.**

The 282 defectives who are under supervision in their homes have been visited by the Mental Welfare Officer, while routine visits of supervision have also been made by the County Health Visitors.

During the year the Mental Welfare Officer has made 770 such visits. The homes of many of the defectives and the conduct of the defectives themselves are entirely satisfactory and in such cases the routine visits of the County Health Visitors are found to be sufficient. The 770 visits made by the Mental Welfare Officer were chiefly special visits to homes where assistance and advice were required by parents having the care of defectives.

**Home Training.**

The training of defectives in their homes in some form of handicraft has continued, and when the work has been saleable the Mental Welfare Officer has assisted in finding purchasers. Special



attention is being given to seven defectives whose work shews improvement, and it is hoped that they will eventually be able to execute work which can be sold. Mat-making and embroidery are the principal handicrafts performed.

#### **General.**

The Mental Welfare Officer has acted as escort in the conveyance of 15 defectives to or from Institutions or when proceeding on Licence. Twenty-four Special Reports to the Board of Control and to Visitors to Institutions on the home circumstances of defectives have been made by the Mental Welfare Officer.

#### **4. MATERNITY AND CHILD WELFARE.**

It is with great regret that I have to record the death of Dr. Lila S. Greig, on 20th September, 1937. Dr. Greig was appointed Lady Medical Officer in May, 1919, and during the eighteen years she was on the staff she served the County well. Not only was she a competent clinician and administrator to whose abilities and enthusiasm the development of the Maternity and Child Welfare services owed much, but among the few who were closely associated with her it was known that she frequently rendered help to deserving cases from her own private funds.

This section of the report, in so far as it deals with Midwives and Maternity and Nursing Homes, refers to the whole Administrative County. The Urban District of Kettering is a separate Maternity and Child Welfare Authority, and details of its Child Welfare work will be found in the Report of the Medical Officer of the Urban District.

##### **(i) MIDWIFERY AND MATERNITY SERVICES.**

The Minister of Health has requested all medical officers of health to Local Supervising Authorities to include in their Annual Reports for 1937 a description of the provisions made for a domiciliary service of midwives in pursuance of the Midwives Act, 1936.

The Council's proposals under Section 1 of the Act were based upon recommendations contained in the following memorandum written by my predecessor, Dr. J. M. Mackintosh, in September, 1936.

(In the memorandum the grants suggested by Dr. Mackintosh have been revised so as to show the grants as finally approved by the County Council, the latter figures being slightly greater than the former.)

#### **MEMORANDUM ON THE MIDWIVES ACT, 1936.**

##### **1. Introduction.**

The main purpose of the Midwives Act is "to improve the standard of domiciliary midwifery in England and Wales by establishing an adequate service of salaried midwives." The Act places an obligation upon the County Council, as local supervising authority, to establish this service either by

- (a) making arrangements with Welfare Councils or voluntary organisations, or by
- (b) employing midwives by direct contract.

The latter course (b) would require the creation of a new service, at a cost of approximately £9,000 per annum. Apart from cost, this course is open to the fatal objections that all sick nursing is sacrificed and that voluntary assistance is ignored.

We may therefore turn at once to the first proposal (a), under which the County Council will enter into arrangements with the Northamptonshire Nursing Association, which already provides a midwifery service covering almost the whole County. (It may be noted at this point that Kettering Urban District Council is a "Welfare Council" under the Act, and will be consulted, as a matter of course, by the County Council. The Kettering Nursing Association,

however, has been responsible hitherto for the domiciliary midwifery service in Kettering. It seems reasonable to suggest that, for the sake of uniformity and continuity of service, these arrangements should be continued.)

## **2. Procedure.**

The County Council must submit its proposals to the Minister within six months from the commencement of the Act, unless a longer period is allowed in particular cases. Before this the Authority must consult (in this area)—

- (a) The Northamptonshire Nursing Association.
- (b) Kettering Urban District Council.
- (c) The British Medical Association.
- (d) The Midwives' Union.
- (e) Certain external or minor organisations providing services in this County.

I suggest the following time-table :

1. July, 1936. Consideration of draft memorandum by Maternity and Child Welfare Sub-Committee. (This has been carried out.)
2. Sept. 26th, 1936. Presentation of draft memorandum with any amendments approved by Sub-Committee to Public Health Committee. Appointment of representatives to consult with various bodies.
3. Oct.-Nov., 1936. Consultations and framing of "agreed proposals" with Nursing Association.
4. Dec. 12th, 1936. Presentation of "agreed proposals" to Public Health Committee.
5. Jan. 30th, 1937. Final approval of Scheme by Public Health Committee, and inclusion in estimates.
6. Feb. 25th, 1937. Submission of proposals, with estimate, to the County Council.

## **3. Obligations Imposed on the Local Supervising Authority by the Act.**

(i) To raise the status of the midwife by :

- (a) Improved training. This is already provided for by the new rules of the Central Midwives' Board.
- (b) Attendance at Post-Certificate Courses of Instruction. (Section 7.)
- (c) Prohibition of Unqualified Practice. (Section 6.)
- (d) Improved salary and conditions of service.

This is not explicitly provided in the Act, but it is implied by the financial arrangements, and the whole tenor of Section 2. The Minister of Health, in moving the second reading of the Bill, stated that local authorities would be asked to fix their grants to voluntary organisations on a basis which would ensure that the salaries and fees would correspond closely to those adopted by the local authority. "The Bill is designed to raise the status of the midwifery profession by providing adequate salaries and sure prospects to those entering the new service."

(ii) To secure the services of a qualified midwife for every expectant mother, whatever her circumstances, by—

- (a) Making arrangements for the service of whole-time midwives to cover the entire area. At present there are a few unnursed areas in the County with a population of about 3,000.
- (b) Prohibition of unqualified persons acting as Midwives or Maternity Nurses for gain.

(iii) To employ in the service only those midwives who maintain a high degree of efficiency. This is secured by :

- (a) Granting compensation to midwives who voluntarily surrender their certificates within three years of the commencement of the Act.
- (b) Requiring midwives who appear to be no longer capable, by reason of age or infirmity, of efficiently performing their duties, to surrender their certificates. Compensation is payable also under this sub-section,



#### 4. Suggested Method of Carrying out the Obligations imposed on the Supervising Authority.

In order to arrange for the equitable distribution of grants to the Voluntary Associations which provide the Midwifery Services in each area of the County, it is necessary to devise some scheme which is universally applicable. The Local Supervising Authority must know the needs of each District Nursing Association and the services which it provides, although the actual grant will, in fact, be given to the County Nursing Association. The more obvious methods of allocating the grant (*e.g.*, based on the amount of work done, or on the number of births in each area) were carefully examined and found to be unfair, because the more populous areas, which are already more or less self-supporting, would have the advantage over the poorer and more scattered districts. It would also be unsatisfactory to calculate the amount of the grant as a supplement to the actual receipts of each Association from fees, subscriptions, and special efforts, as this would be an encouragement to slackness in the organisation and working of the various sources of revenue.

After consideration of many alternative methods, I have come to the conclusion that the most satisfactory way to secure a fair distribution of grants is by the use of an empirical formula. Briefly, the scheme suggested is based on a calculation of the needs of each area, and the revenue which it might be expected to collect from payments, subscriptions, and voluntary gifts, according to the formula set out below. The grant allocated to the Northamptonshire Nursing Association for distribution to any given area is the difference between its needs and its calculated revenue. It is recommended that in order to provide "adequate salaries and sure prospects" for midwives, each area should receive a basic grant of not less than £50 per annum. Otherwise, areas which are already self-supporting would receive no stimulus to carry out Midwifery services on behalf of the County Council, and that authority might be faced with the expensive alternative of employing directly a whole-time midwife.

The great majority of the areas are too small or scattered to be able to maintain the whole-time services of a midwife. Their needs are so great that they would be unable to support a District Nurse-Midwife without further special assistance from the County Council. In such areas it is recommended that the basic grant of £50 be increased in accordance with the formula.

The calculation of the needs of each area is as follows :

(1) The salary recommended is £180 per annum, rising by yearly increments of £5 to £200. Midwives with more than four years' experience should start at £200.

(2) Expenses are calculated as follows :

(a) Districts in which the use of a car is indispensable.

Salary	...	...	...	...	£200
Telephone	...	...	...	...	6
Car ...	...	...	...	...	50
Grant towards Car Replacement				...	20
Other Expenses	...	...	...	...	14
					<hr/>
					£290
					<hr/>

(b) Districts in which the use of a bicycle is sufficient.

Salary	...	...	...	...	£200
Telephone	...	...	...	...	6
Bicycle	...	...	...	...	6
Other Expenses	...	...	...	...	14
					<hr/>
					£226
					<hr/>

The formula for the calculation of receipts is as follows :

(a) *Fees.* The probable number of births according to the estimate of the Registrar-General may be taken as 14 per 1,000 of the population, and the receipts from fees are calculated at 80% of the births at 25/- per case. It should be clearly understood that this assessment is

purely empirical, and does not mean that each District Nursing Association is bound to charge 25/- per case. This sum must be regarded only as a standard figure for the purpose of the formula.

(b) *Members' Subscriptions.* The formula is based on a membership of 10% of the total population of the area, at 6/- yearly per member. This does not mean that 6/- must be charged by every Association. It is purely a paper calculation in order to arrive at an average figure.

(c) *Voluntary Subscriptions, Special Efforts, etc.* These are calculated at 6d. per head of the total population of the areas, plus other receipts from investments, charities, and other special sources.

The formulæ which have been suggested cannot do more than provide a basis for the application of grants to individual associations. No rule-of-thumb method is possible, as the conditions in each district show incalculable variations. One area, for example, which theoretically should be almost self-supporting, is in fact hardly more than a dormitory to a large town, and it is exceedingly difficult to collect subscriptions for local purposes. Another area which, according to formula, should have great difficulty in securing adequate funds, is in fact well supported by large subscriptions. Considerations such as these must be taken into account in determining the amount of grant to each area, and it will be necessary, no doubt, to depart from formula in certain difficult cases, and assess the grant equitably in accordance with local circumstances. It will be desirable also to give the scheme sufficient elasticity to modify the grant in the light of working experience from year to year. So far as the County Council is concerned, however, the main object of this memorandum is to set down a provisional figure which represents as nearly as possible their total liability.

In application of the formula it is recommended that additional grants be given to district associations whose needs are such that they cannot be self-supporting, of a sum which will provide a total contribution not exceeding £100 annually.

It is obvious that the suggested grants must be subject to certain conditions.

(a) The Local Supervising Authority must be satisfied that the midwife employed by each District Nursing Association is efficient.

(b) Each District, in order to qualify for a grant, must have sufficient population and area to justify the appointment of a separate Nurse-Midwife. Some of the existing areas in the County are too small to require the whole-time services of a midwife, and the grant must be conditional upon re-grouping. If some of the smaller Associations cannot see their way to re-group in order to promote efficiency, or if Associations fail to take in neighbouring areas which are at present un-nursed, it may be necessary for the Authority to withhold the grant for the time being.

If certain Associations, in accordance with representations made by the Supervising Authority agree to re-group, or to take in un-nursed areas, it may be necessary for them to provide a motor-car, which had not hitherto been required. In such cases it is suggested that a non-recurring grant of £100 be given towards the purchase of the first car.

In addition, it may be desirable to promote re-grouping by providing some financial stimulus, in order to promote ultimate economy and efficiency. It is suggested that a special (non-recurring) re-grouping allowance be made in certain cases approved by the Authority.

It is not possible for all Associations to co-ordinate their activities in such a way as to provide for holiday duty without external assistance. A total grant, estimated at £7 10s. for each of the areas requiring holiday assistance, amounts to approximately £300.

The total of grants to Associations comes to £5,200 per annum for Midwifery Services, and a non-recurring grant for re-grouping, totalling £1,680.

All the above grants would be given to the County Nursing Association for re-distribution. A further grant, however, is necessary to provide for Central administration, and other County expenses, such as Emergency Nursing, Post Certificate Courses, and grants to candidates for Midwifery training. The suggested allocation of these grants is set out below in tabular form :—



## ANNUAL GRANTS.

	£	£
To Associations for Midwifery Service ... ..		5,200
For re-distribution by C.N.A.—		
1. Holiday Nurses ... ..	300	
2. Nursing of Special Cases* ... ..	200	
3. Post Certificate Courses (10 yearly at £20 each) ... ..	200	
4. Candidates Midwifery Training (Training to be more expensive and longer) ...	300	
	—	1,000
Central Expenses—		
Midwifery Inspections and C.N.A. Admini- tration ... ..	850	
Towards purchase of C.N.A. cars (1 every 18 months) ... ..	34	
	—	884
		7,084
Non-recurring Grants—		
Special Grants for re-grouping ... ..		150
Grant for purchase of first car on re-grouping		1,530
		—
		1,680
* <i>Puerperal Pyrexia, Ophthalmia Neonatorum, Measles, etc.</i>		—

It is not possible, at this stage, to estimate the expenditure involved in the compensation of midwives who voluntarily surrender their certificates, or who are required by the Authority to give up practice.

## KETTERING NURSING ASSOCIATION.

This Association employs a staff of six nurses to carry out domiciliary midwifery in the town. It is recommended that a special grant of £30 per midwife be paid to the Nursing Association in respect of their midwifery service, amounting in all to £200.

## SUMMARY.

The total annual grant recommended for the entire Midwifery Service in the County amounts to £7,084, of which £5,200 represents grants to District Associations (including Kettering) for Midwifery Services, £1,000 is for re-distribution by the County Nursing Association for Holiday and Emergency Nursing, Post-Certificate Courses and Grants to Candidates for Training, and £884 is for Administration.

The existing grant for Midwifery in the County is £2,175, so that £4,909 represents the new service, for which special financial provision is made under the Act.

In addition, non-recurring grants of £1,680 for re-grouping, and an unknown amount (£2,000 at a guess) for compensation, require to be provided.

J. M. MACKINTOSH,  
County Medical Officer of Health.

September, 1936.

After adjustment of minor details the Northamptonshire County Nursing Association and the County Council came to agreement on the basis of the above memorandum. Practically all the District Nursing Associations were also found willing to adopt the County Council's proposals after these had been explained. Meetings were held by a number of associations at which addresses on the County scheme were given by the Chairman of the Public Health, etc., Committee, the Rt. Hon. The Lord Henley, and by Dr. Mackintosh.

It is a tribute to the co-operative spirit of the voluntary nursing associations in the County that they all, with one exception, agreed to adopt the County's proposals although these involved a considerable enlargement and revision of areas, including the combination of two small adjacent associations into one association in seven instances.

#### THE MAIN FEATURES OF THE SCHEME AS FINALLY AGREED UPON WERE :

The County Nursing Association and the District Nursing Associations were to act as agents for the County Council in providing a domiciliary midwifery service to cover all parts of the County.

The areas to be served by each association and the number of district nurse-midwives to be employed by each were specified.

The number of district nursing associations co-operating in the scheme was 57, and the number of midwives to be employed was 69.

The inclusive salary paid to the nurse midwives to be not less than £180 rising by £5 increments to £200 per annum after four years' experience.

Grants to each association were fixed approximately in accordance with the formula contained in Dr. Mackintosh's memorandum. The formula was not by any means rigidly adhered to, because local circumstances were also taken into account.

It was decided that the basic grant should be £50 to each association, but that this could be increased up to a maximum of £100 in respect of each midwife employed.

Grants for distribution to District Nursing Associations were fixed at £5,200 per annum. Other grants were as shown in the memorandum.

The Scheme for the Provision of a Domiciliary Midwifery Service and the Memorandum of Arrangements Supplemental to the Scheme which are printed below, set out all the arrangements in full detail :

#### NORTHAMPTONSHIRE COUNTY COUNCIL AND NORTHAMPTONSHIRE NURSING ASSOCIATION.

SCHEME for the provision of a domiciliary service of salaried midwives by the Northamptonshire Nursing Association (hereinafter referred to as " the County Association ") under arrangements made in pursuance of the Midwives Act, 1936, with the County Council for the Administrative County of Northampton (hereinafter referred to as " the County Council ").

1. Each of the District Nursing Associations named in the first column of the First Schedule hereto (hereinafter referred to as " the District Associations ") shall employ for the area indicated in the second column of the said Schedule opposite to its name the number of certified midwives specified in relation thereto in the third column of the Schedule.

2. The County Association shall employ such number of certified midwives as may be necessary to provide for the temporary replacement of such of the midwives provided under Clause 1 as may from time to time be rendered unavailable for service and to provide for any part of the County in respect of which a District Nursing Association does not for the time being employ a midwife or midwives under Clause 1.

3. The County Association and the District Associations shall make such arrangements as will secure so far as practicable that the number of midwives specified in the First Schedule in relation to any area are always available for service in that area and that there is no part of the County in respect of which the services of a midwife are not available.



4. The midwives provided under this Scheme shall be the whole-time servants of the County Association or the District Association as the case may be which employs them.

5. The midwives so employed shall be available for attendance on women in their own homes either as midwives or if a doctor is engaged for the confinement as maternity nurses in childbirth and from time to time thereafter during a period not less than the lying-in period as defined in the rules for the time being of the Central Midwives Board.

6. The salaries and other emoluments paid to the midwives so employed shall be those specified in the Second Schedule hereto, and the fees charged for their services as midwives and maternity nurses respectively shall not exceed those specified in the Third Schedule hereto.

7. The County Association and the several District Associations shall supply the Council with a list of the names and addresses of the midwives employed by them in pursuance of this Scheme and shall forthwith inform the Council of any change in the list.

8. The County Association and the several District Associations shall keep records of the cases attended by the midwives employed by them in pursuance of this Scheme and of the numbers of their attendances in each case distinguishing between attendances as midwives and attendances as maternity nurses.

9. The County Association and the several District Associations shall supply the Council with such financial and other returns as the Council may reasonably require including a copy of the audited annual accounts of the Association and the records kept by the County Association and the District Associations shall be open to inspection by the Medical Officer of Health of the Council or by any other officer of the Council specially authorised for that purpose.

10. (i) The Council shall during the currency of this Scheme make payments to the County Association for distribution to the District Associations in respect of the provision of a domiciliary midwifery service at the rate of £5,200 per annum by equal quarterly payments on the following days viz. on the First day of June the First day of September the First day of December and the First day of March in each year the first payment in respect of the quarter beginning on the First day of July 1937 to be made on the First day of September 1937 ; and also on the First day of July 1937 shall pay to the County Association for distribution to the District Associations in aid of the expenses of regrouping their areas for purposes of this Scheme and for the purchase of first cars on regrouping the sum of £1,680.

(ii) The County Association shall pay to the several District Associations out of the payments made to the County Association under the preceding paragraph such amounts respectively as may from time to time be agreed between the Council and the County Association.

Provided however that if this Scheme ceases to be binding on any District Association as respects any of the areas mentioned in the First Schedule then during the currency of this Scheme until otherwise agreed between the Council and the County Association the amount which would otherwise have been paid to the District Association for that area shall be retained by the County Association.

(iii) The Council shall also during the currency of this Scheme make payments to the County Association in respect of the provision of holiday substitute and emergency nurses the nursing of special cases securing attendance of nurses at post-certificate courses and training candidates for midwifery in connection with the domiciliary midwifery service before referred to at the rate of £1,000 per annum by equal quarterly payments to be made in each year on the dates mentioned in paragraph (i) the first payment in respect of the quarter beginning on the First day of July 1937 to be made on the First day of September 1937.

Provided that for the purposes of this paragraph with respect to each year if after the end of the year it appears to the County Council that the amount of the payments made and expenditure incurred by the County Association is less than the amount received by the County Association from the County Council then the County Association shall repay the surplus to the County Council on demand and (without prejudice to any other means of recovery) the County Council

may deduct the amount of the surplus from any subsequent payment to be made to the County Association under this Scheme.

11. (i) Any difference or dispute between any of the parties arising under this Scheme shall be referred to a single arbitrator appointed by agreement between the parties or in default of agreement by the Minister of Health and

(ii) This Scheme shall have effect as from the First day of July 1937 and shall continue in operation as respects each of the areas mentioned in the First Schedule subject to any variations which may be agreed between the Council the County Association and the District Association for that area until it is determined either by agreement between those bodies or by not less than six months' notice in writing terminating on the Thirty-first day of March in any year given with the consent of the Minister by any one of them. Provided that a notice given by a District Association under this paragraph with respect to the area for which the District Association acts shall not affect the obligations of the County Association under Clauses 2 to 9 of this Scheme as respects that area.

(iii) The determination of this Scheme under this Clause shall not affect the right of the Council to secure the repayment provided for under the proviso to paragraph (iii) of Clause 10.

12. In this Scheme unless the context otherwise requires the expression "year" shall mean the period commencing on the First day of April and ending on the Thirty-first day of March next following.

## FIRST SCHEDULE.

<i>Name of District Association</i>	<i>Area to be served. (References are to Parishes, Wards and Urban Districts.)</i>	<i>Number of Midwives to be employed.</i>
<i>Col. 1.</i>	<i>Col. 2.</i>	<i>Col. 3.</i>
Aldwincle and Lilford	Aldwincle, Wadenhoe, Lowick, Lilford, Pilton, Thorpe Achurch, Titchmarsh, Clopton	1
Blakesley and Lichborough	Blakesley, Greens Norton, Woodend, Abthorpe, Bradden, Cold Higham, Lichborough, Adstone, Farthingstone, Maidford.	1
Bozeat and Castle Ashby	Castle Ashby, Yardley Hastings, Grendon, Whiston Ward of Parish of Cogenhoe, Bozeat, Easton Maudit, Denton.	1
Brackley	Brackley, Evenley, Steane Ward of Parish of Farthinghoe, Hinton-in-the-Hedges, Syresham, Whitfield, Radstone.	1
Braunston	Braunston, Ashby St. Ledgers, Welton, Kilsby, Barby, Watford.	1
Brigstock	Brigstock, Stanion, Sudborough.	1
Brixworth	Brixworth, Lamport (including Hanging Houghton and Faxton), Scaldwell.	1
Broughton and Walgrave.	Broughton, Cransley, Pytchley, Orlingbury, Isham, Loddington (including Mawsley), Thorpe Malsor, Orton, Great Harrow- den, Little Harrowden, Walgrave, Old, Hannington, Holcot.	2
Bugbrooke	Bugbrooke, Kislingbury, Upper Heyford, Lower Heyford.	1
Bulwick	Bulwick, Deene, Laxton, Blatherwycke, Gretton, Deene- thorpe, Harringworth, Fineshade, Wakerley	1
Burton Latimer	Burton Latimer, Cranford, and that part of the Urban District of Kettering formerly the Parish of Barton Seagrave.	1
Byfield	Byfield, Boddington (Upper and Lower), Aston-le-Walls (including Appletree), Charwelton, Chipping Warden, Edg- cote.	1
Carlton	East Carlton, Middleton, Cottingham (including Beanfield Lawns), Rockingham.	1
Clipston	Clipston, Arthingworth, Kelmarsh, East Farndon, Welford, Sibbertoft, Sulby, Harrington, Maidwell, Great Oxendon, Draughton, Stanford, Marston Trussell (including Thorpe Lubenham and Hothorpe).	1
Corby	Corby, Weldon (Great and Little).	3
Cottesbrooke and Thornby	Cottesbrooke, Creaton, Spratton, Teeton Ward of Parish of Hollowell, Thornby, Naseby, Cold Ashby, Hazelbech.	1
Daventry	Daventry, Norton.	1
Desborough	Desborough.	1



<i>Name of District Association.</i>	<i>Area to be served. (References are to Parishes, Wards and Urban Districts.)</i>	<i>Number of Midwives to be employed.</i>
<i>Col. 1.</i>	<i>Col. 2.</i>	<i>Col. 3.</i>
Duston	Duston (including New Duston), Harpole, Upton.	1
Earls Barton	Earls Barton.	1
Easton-on-the-Hill	Easton-on-the-Hill, Duddington, Collyweston.	1
Ecton	Ecton, Billing (Great and Little), Weston Favell.	1
Gayton	Gayton, Rothersthorpe, Pattishall (including Fosters Booth), Tiffield, Blisworth, Milton	1
Geddington	Geddington, Newton, that part of the Parish of Oakley formerly known as Little Oakley, Weekley, Grafton Underwood, Warkton.	1
Harlestone	Harlestone, Church Brampton, Chapel Brampton, East Haddon, Holdenby, Brington (Great and Little), Althorp.	1
Helmdon and Culworth	Helmdon, that part of the Parish of Greatworth formerly known as Stuchbury, that part of the Parish of Helmdon formerly known as Astwell and Falcutt, Culworth, Sulgrave, Thorpe Mandeville, Moreton Pinkney, Wappenham, Slapton, Weston and Weedon (including Plumpton).	1
Higham Ferrers	Higham Ferrers, Chelveston-cum-Caldecott	1
Little Houghton	Little Houghton, Great Houghton, Brafield, Cogenhoe, Hackleton (including Piddington and Horton).	1
Irchester	Irchester.	1
Irthlingborough	Irthlingborough	1
Kettering	Kettering Urban District (less the portion formerly in the Parish of Barton Seagrave) together with Furnace Cottages on the Rothwell Road.	6
King's Cliffe	King's Cliffe, Apethorpe, Woodnewton, Yarwell, Nassington, Southwick, Fotheringhay.	1
Long Buckby	Long Buckby.	1
Marston St. Lawrence	Marston St. Lawrence, Farthinghoe, Greatworth, Thenford, Middleton Cheney, Warkworth, Chacombe.	1
Moulton	Moulton, Pitsford, Boughton.	1
Newbottle.	Newbottle (including Charlton), Aynho, Croughton, King's Sutton.	1
Newnham	Newnham, Badby, Everdon, Catesby, Staverton, Hellidon, Preston Capes, Fawsley.	1

<i>Name of District Association.</i>	<i>Area to be served. (References are to Parishes, Wards and Urban Districts.)</i>	<i>Number of Midwives to be employed.</i>
<i>Col. 1.</i>	<i>Col. 2.</i>	<i>Col. 3.</i>
Oundle	Oundle, Ashton, Cotterstock, Glapthorn, Tansor, Stoke Doyle, Benefield, Barnwell, Hemington, Lutton, Polebrook (including Armston), Thurning, Luddington, Warmington.	2
Potterspury and Stoke Bruerne	Potterspury, Yardley Gobion, Furtho, Stoke Bruerne, Shutlanger, Ashton, Grafton Regis (including Alderton).	1
Raunds	Raunds (including Stanwick), Hargrave.	1
Ringstead	Ringstead, Great Addington, Little Addington.	1
Road	Road, Courteenhall, Hartwell, Hardingstone, Wootton, Quinton, that part of the Parish of Hackleton formerly known as Preston Deanery, Collingtree.	1
Rothwell	Rothwell.	1
Rushden	Rushden, Newton Bromshold.	2
Stoke Albany	Stoke Albany, Wilbarston, Dingley, Ashley, Brampton Ash, Weston-by-Welland, Sutton Bassett, Rushton (including Pipewell, Glendon and Barford), that part of the Parish of Oakley formerly known as Great Oakley, Braybrooke.	1
Thrapston	Thrapston, Islip, Denford.	1
Towcester	Towcester, Easton Neston.	1
Weedon	Weedon, Flore, Dodford, Brockhall, Whilton, Stowe-nine-Churches.	1
Wellingborough	Wellingborough (including the Finedon Ward).	4
Wicken	Wicken, Passenham, Cosgrove.	1
Wilby	Wilby, Overstone, Great Doddington, Hardwick, Mears Ashby, Sywell.	1
Whittlebury	Whittlebury, Silverstone, Paulerspury.	1
Wollaston	Wollaston, Strixton.	1
Woodford	Woodford, Twywell, Slipton Ward of Parish of Lowick.	1
Woodford Halse	Woodford Halse, Eydon, Canons Ashby.	1
Yelvertoft	Yelvertoft, Elkington, Lilbourne, Winwick, Claycoton, West Haddon, Crick, Guilsborough, Hollowell, Ravensthorpe (including Coton).	1

## SECOND SCHEDULE.

Inclusive salary to be paid to the Nurse-Midwife—not less than £180, rising by annual increments of £5, to £200 per annum after four years' post-certificate experience, inclusive of uniform, board and lodging. Travelling expenses extra. Existing and newly appointed midwives to commence at the appropriate salary under the scale in accordance with their length of service.

## THIRD SCHEDULE.

Fees to be charged for patients, not exceeding :—

<i>Subscribers.</i>		<i>Non-Subscribers.</i>	
Midwifery	£2.	Midwifery	£3.
Maternity	£2.	Maternity	£3.

The arrangements for total or partial remission of fees in necessitous cases will be left to the discretion of the Committees of the District Associations.

NOTE.—The payments provided for under this Scheme have been duly made up to the date of the approval indicated below.

Approved on behalf of the County Council for the Administrative County of Northampton and the Northamptonshire Nursing Association this 27th day of November, 1937.

The Common Seal of the County Council of the Administrative County of Northampton was hereunto affixed in pursuance of a resolution of the Council in the presence of :



(Signed) H. S. MARTIN,  
Clerk of the County Council.

Signed on behalf of the Northamptonshire Nursing Association  
by :

Chairman : (Signed) ETHEL WICKHAM.  
Treasurer : (Signed) F. E. WIGMORE.



NORTHAMPTONSHIRE COUNTY COUNCIL AND NORTHAMPTONSHIRE  
NURSING ASSOCIATION.

MEMORANDUM of arrangements supplemental to the Scheme (hereinafter referred to as "the Principal Scheme") approved this day on behalf of the above-mentioned bodies for the provision of a domiciliary service of salaried midwives.

1. So long as the County Association shall undertake the inspection of midwives at the request and on behalf of the Council as Local Supervising Authority under the Midwives Acts 1902-1936 until otherwise agreed the Council shall make payments to the County Association at the rate of £884 per annum by equal quarterly payments on the First Day of June the First day of September the First day of December and the First day of March in each year the first payment in respect of the quarter beginning on the first day of July 1937 to be made on the First day of September 1937.

2. It is the intention that the payments to be made to the District Associations by the County Association out of the sum mentioned in paragraph (i) of Clause 10 of the Principal Scheme substantially shall consist of a basic grant of £50 per annum to each District Association plus such sum as the Council may agree with the County Association to be necessary in view of the receipts and expenses of the District Association to maintain the midwifery service in a state of efficiency provided that the maximum annual payment to a District Association shall not exceed £100 in respect of each midwife employed by that Association exclusive of any non-recurring payment which may be made to assist regrouping or the provision of a first car.

3. Payments made by the Council to the County Association under the Principal Scheme and this Memorandum shall be deemed to include any payments which may become due from the Council to the County Association in respect of the same period under any Scheme for the time being in force under Section 101 of the Local Government Act, 1929.

NOTE.—The payment provided for under this Memorandum has been duly made up to the date of the approval indicated below.

Approved on behalf of the County Council for the Administrative County of Northampton and the Northamptonshire Nursing Association this 27th day of November, 1937.

The Common Seal of the County  
Council of the Administrative  
County of Northampton was  
hereunto affixed in pursuance  
of a resolution of the Council in  
the presence of :



(Signed) H. S. MARTIN,  
Clerk of the County Council.

Signed on behalf of the North-  
amptonshire Nursing Association  
by :

Chairman : (Signed) ETHEL WICKHAM.  
Treasurer : (Signed) F. E. WIGMORE.

The maximum fees are prescribed in the third schedule to the scheme, but the fees generally charged are as follows :—

Subscribers :      Midwifery—£1 to £1/10, but £1 5s. is the fee most commonly charged;  
                                Maternity—17s. 6d. to £1 5s., the commonest fee being 17s. 6d. ;

Non-Subscribers : The usual practice is to charge double the subscribers' fees.

Two permanent holiday nurses were employed by the County Nursing Association during the year. In addition, 37 nurses were employed for emergency duty and to relieve temporarily during holidays, sickness, etc.

Four nurses were sent for training during the year, and seven midwives were sent for one month's post-certificate course.

It has also been decided by the County Nursing Association that no untrained nurses will in future be sent for midwifery training—that is, no candidate will be admitted who cannot qualify on twelve months' training under the new rules of the Central Midwives Board.

The numbers of cases attended by midwives employed by District Nursing Associations in pursuance of Section 1 of the Midwives Act, 1936, were as follows :—

Cases attended as midwives .....	959
Cases attended as maternity nurses .....	934
	<hr/>
Total .....	1,893
	<hr/> <hr/>

The number of midwives in independent practice at the end of the year was 36.

#### (ii) NURSING IN THE HOME.

Under an agreement between the County Council and the County Nursing Association for the provision of special nurses in certain cases of infectious disease, two cases of puerperal fever, nine of puerperal pyrexia, nine of whooping cough, thirteen of ophthalmia neonatorum, twenty-seven of measles, and thirty-five cases of infantile diarrhoea were nursed in the home. Nursing care was also given in a number of other cases not strictly provided for in the agreement.

#### (iii) MIDWIVES.

The Supervisor of Midwives (who is also County Superintendent and Secretary of the Northamptonshire Nursing Association) and her staff made the following visits during the year :—

Routine visits .....	381
Special investigations .....	201

The midwives attended 80.68 per cent. of the total births in the County—54.24 per cent. as midwives and the remainder as maternity nurses.

The number of midwives practising in the area at any time during the year was 176 ; on December 31st, 128 remained in practice.

Six midwives who voluntarily surrendered their certificates, received compensation in accordance with the provision of Section 5 of the Midwives' Act, 1936.

No uncertified person was reported as having practised during the year.

A contribution towards the fee of a midwife was given by the County Council in one necessitous case in which the circumstances were such as to require the attendance of both medical practitioner and nurse.

*Medical Aid to Midwives.* During the financial year, the midwives notified that they had called in medical aid in 527 cases, and 343 claims for payment of fees were made by medical practitioners whose assistance had been sought, as against 527 notifications and 305 claims, 2 of which were subsequently withdrawn, in the previous year. 7 claims were also brought forward from the previous year, and 6 of those received in 1937-38 will be dealt with in the following year. The patients or persons responsible were approached by the County Medical Officer of Health, and 101 paid or undertook to pay the practitioner's account in full. The circumstances of 211 cases were considered by the Standing Sub-Committee of the Public Health, Etc., Committee, who instructed steps to be taken to recover from the patient or person responsible the whole of the fee in 90 cases, and such part of the fee as seemed reasonable in view of



the family's income in 65 cases. In 56 cases they decided to make no claim against the family. 32 other cases were in connection with babies suffering from ophthalmia neonatorum ; no claim on the family is made in such cases.

*Educational and Social Work.* The Midwives' Union arranged ten lectures and demonstrations, two of which were illustrated by films, and all were well attended ; the annual outing of the Union was held at Stratford-on-Avon. A steady increase in the membership of this association is reported.

#### (iv) MATERNITY AND NURSING HOMES.

The number of homes on the register during the year was 8, and 27 visits of inspection were paid by the Medical Officers. In addition, 2 inspections were made to midwives in Kettering and District General Hospital and Kettering Public Assistance Institution.

No application for delegation of powers to a County District was received under section 9 (2) of the Nursing Homes Registration Act, 1927, or under section 194 of the Public Health Act, 1936.

Further particulars regarding the Nursing Homes in the County are given in the Statistical Section of the report.

#### (v) MATERNAL MORTALITY (excluding Kettering U.D.).

The Registrar-General reported six maternal deaths, two of which were from sepsis and four from other puerperal causes. One of these was from secondary hæmorrhage following operation for ectopic gestation ; one from pulmonary embolus, ulcerative endocarditis, and puerperal sepsis ; one from eclampsia ; one from ante-partum and post partum hæmorrhage and placenta prævia ; one from aortic regurgitation, mitral stenosis, and chronic bronchitis ; and one from ante-partum hæmorrhage and placenta prævia. Five died in hospital and one at home.

The death rate per thousand live and still births was 2.196.

*Puerperal Fever.* Four notifications were received (excluding Kettering U.D.). Two of these patients were treated in hospital ; both died. Puerperal Fever notifications relate to the first thirty-nine weeks of the year only. Cases occurring afterwards are classed as Puerperal Pyrexia and included accordingly.

*Puerperal Pyrexia.* Twenty-one notifications were received (excluding Kettering U.D.). Sixteen of the notified cases were treated in hospital ; there were no deaths.

The services of Mr. R. Watson, F.R.C.S. (Ed.), M.C.O.G., the Consultant Obstetrician, are available to the medical profession throughout the whole of the Authority's area.

No charge is made to the medical practitioner or to the patient for Mr. Watson's services, but the scheme is applicable only to patients who cannot afford a consultant's fee. Application for these services should be made to the Health Department (Telephone, Northampton 2219), but, in emergency, can be made direct with Mr. Watson at his house, The Avenue, Cliftonville, Northampton (Telephone, Northampton 3103), and the Health Department subsequently notified of the emergency.

Anti-streptococcal serum for the treatment of puerperal fever is provided free of charge for necessitous cases, and similar provision is made for the examination of pathological material. Applications for serum should be made to either Northampton or Kettering General Hospitals. Pathological examinations are conducted at Northampton General Hospital only. Prontosil can be obtained free of charge for cases unable to afford it on the recommendation of the Consultant Obstetrician.

Hospital Accommodation : Cases of Puerperal infections may be admitted to the following hospitals, on application to the Health Department by the medical practitioner :—



Northampton General Hospital ;  
 Kettering and District General Hospital ;  
 The Hospital of St. Cross, Rugby ;  
 Stamford, Rutland and General Infirmary ;

according to the area in which the case occurs.

(vi) OPTHALMIA NEONATORUM. Twelve cases were notified (excluding Kettering U.D.) all of which made a good recovery.

CASES			VISION UN- IMPAIRED	VISION IMPAIRED	TOTAL BLINDNESS	DEATHS
NOTIFIED	TREATED					
	AT HOME	IN HOSPITAL				
12	12	—	12	—	—	—

All cases were visited by the Assistant Medical Officers.

Arrangements are made with Northampton General Hospital, the Hospital of St. Cross, Rugby, and the Stamford, Rutland and General Infirmary for the admission of these cases, either with or without their mothers, and no charge to the parents is made for treatment.

(vii) MATERNITY HOSPITALS.

The County Council make provision under arrangements with the voluntary institutions serving the County for two classes of maternity cases :

- (1) those in which the accommodation at home is unsuitable for the conduct of a confinement, and
- (2) those in which the confinement is likely to be abnormal.

Patients may be admitted to the following institutions :—

Kettering and District General Hospital ;  
 The Barratt Maternity Home, Northampton General Hospital ;  
 Stamford, Rutland and General Infirmary ;  
 Market Harborough and District Hospital ;  
 Hospital of St. Cross, Rugby (abnormal cases only).

Cases are admitted only on the certificate of the County Medical Officer (except in emergency, when notification may be made to the Health Department after admission) and a patient is required to contribute towards the cost of maintenance an amount decided upon by the Standing Sub-Committee of the Public Health Committee after consideration of the financial circumstances of the family. The cases actually admitted during the year were :—

Kettering and District General Hospital .....	57
The Barratt Maternity Home, Northampton General Hospital	101
Stamford, Rutland and General Infirmary .....	1
Market Harborough and District Hospital .....	3
Hospital of St. Cross, Rugby .....	11

The total number of cases admitted to hospital under the County arrangements was 273, compared with 135 in 1936, and 100 in 1935. The arrangement for the admission of patients to the Warwickshire County Maternity Home at Rugby has been terminated, the demand for admission having increased to such an extent that the Warwickshire Authorities felt that they must reserve the whole of the accommodation for cases from their own area.

## (viii) CLINICS AND TREATMENT CENTRES.

At the end of the year, there were 25 Infant Welfare Centres in the County (including the Military Centre at Weedon), and 3 Ante-Natal Clinics. A new Infant Welfare Centre was opened at Irthlingborough, which held its first ordinary session in January. Meetings are held in the Church Hall on the first and third Tuesdays in each month at 2.30 p.m.

Wellingborough Infant Welfare Centre gained a further success in the National Parentcraft competitions organised by the National Association of Maternity and Child Welfare Centres and for the Prevention of Infant Mortality, for the second year in succession receiving the National Parentcraft Challenge Shield, which is the first award in these competitions. For the past five years the Challenge Shield has been won by centres in Northamptonshire; the Rushden Centre which held it for the three years 1933-35 were ineligible to compete in 1937, but they nevertheless entered a team and received the chief individual award, the Rhondda Mothercraft Shield. Other County centres which did well in these competitions were Higham Ferrers, Wollaston, Irchester and Earls Barton. Several of the County competitors were presented with special framed certificates to show that their work had been inspected by Her Majesty The Queen.

The total number of attendances at all Infant Welfare Centres during the year by children under one year of age was 5,783, and by children between the ages of one and five years 7,295, showing a total increase of 656 attendances on the figures of the previous year.

The three Ante-Natal Centres mentioned above are at Wellingborough, Northampton and Byfield. The number of expectant mothers who attended these centres during the year was 129, and they made 196 attendances. In addition, expectant mothers from County areas attend Ante-Natal Clinics belonging to the Kettering Urban District Council, the Banbury Town Council, the Warwickshire County Council at their Rugby Maternity Home, and the Barratt Maternity Home, Northampton. 1,350 attendances were made by 426 expectant mothers at these clinics during the year.

The total number of expectant mothers attending clinics administered either by the County or by other Authorities was 555, and the number of attendances was 1,546.

Consultative Ante-Natal Clinics are held weekly at Northampton General Hospital and fortnightly at Kettering and District General Hospital by Mr. R. Watson, the Council's Consultant Obstetrician. The number of cases seen in a consultative capacity at the former clinic was 163, and at the latter clinic 140. In addition, patients recommended for admission to the Barratt Maternity Home on account of unsatisfactory home conditions are supervised at the Ante-Natal Clinic held at Northampton General Hospital, the number of such cases attending during the year being 21.

Further details with regard to attendances at Infant Welfare Centres are given in the statistical section of the report.

The Clinics organised by the Manfield Orthopædic Hospital continued their valuable work during the year, and cases were referred from time to time by the Medical Officers attending the Infant Welfare Centres. Sixteen children under five years of age were admitted as County Council patients to Manfield Hospital. One hundred and seventeen children suffering from orthopædic defects were referred to the clinics for treatment.

## (ix) MILK GRANTS.

A free supply of milk was granted to infants, expectant and nursing mothers in 1,118 cases. In each of these cases the financial circumstances of the family were considered by the Standing Sub-Committee of the Public Health Committee. The total quantity of milk supplied by the Council amounted to 3,469 $\frac{3}{4}$  liquid gallons, and 294 pounds of dried milk.



## (x) HEALTH VISITING.

At the end of the year the staff consisted of twenty-one Health Visitors and one Superintendent. The following is a short summary of the work of the Health Visitors (excluding school nursing) :—

## HEALTH VISITORS' VISITS.

	1935	1936	1937
1. Ante-Natal .....	247	160	195
2. Infants .....	23,362	23,688	25,746
3. Children 1—5 years .....	22,361	21,492	27,587
4. Infant Deaths .....	137	137	121
5. Still-births .....	68	82	72
6. Infant Life Protection ...	1,144	1,094	951
7. Boarded out (P.A.C.) ...	416	533	512
8. Tuberculosis cases .....	1,689	1,540	2,019
9. Mental Defectives .....	384	255	348
10. Free milk enquiries. ....	539	520	692
11. Social Visits .....	530	374	412
	<hr/> 50,877 <hr/>	<hr/> 49,875 <hr/>	<hr/> 58,655 <hr/>

Attention is directed to the increased number of visits paid to infants and toddlers consequent upon the addition of four health visitors to the staff as the result of the Council's consideration of Circular 1550, reference to which was made in last year's report.

The full effect of the increases to the health visiting staff will not be apparent until next year as three of the additional health visitors did not commence duty until the autumn.

In addition, the Health Visitors made 522 attendances at the Infant Welfare Centres and gave 133 lectures to the mothers.

## (xi) CHILD LIFE PROTECTION.

The Health Visitors continued visitation under Part I. of the Children Act, 1908, and the Children and Young Persons Act, 1932, until 30th September, 1937, after which visits were paid under the provisions of Sections 206 to 220 of the Public Health Act, 1936. Periodical reports have been received upon cases under their supervision. At the end of 1937, 115 foster mothers and 153 children were on the register. During the year, 86 children were removed from the County, 13 were returned to the care of parents or relatives, 5 were removed to institutions, 1 was legally adopted, 2 died, and in 48 cases supervision was discontinued on the child reaching the age of nine years. 951 visits were paid by the Health Visitors during the year. All reports are reviewed by the medical staff, and prompt measures are taken to investigate any case in which an adverse report is received.

## (xii) MENTAL DEFICIENCY.

The Health Visitors pay routine domiciliary visits to mental defectives who are living in good homes and whose conduct is satisfactory. Other defectives who require special supervision are visited by the Mental Welfare Officer.

## (xiii) UNMARRIED MOTHERS.

The Public Health Committee has authorised the Standing Sub-Committee to consider applications from the Peterborough Diocesan Moral Welfare Association for contributions in respect of the cost of treatment of unmarried mothers, and to settle provisionally the payments to be made by the County Council on account of maintenance of cases in suitable homes, subject to the amounts thereof being reported to, and confirmed by, the Committee. Wherever possible, applications for contributions towards the cost of maintenance in the homes are made



to the Council prior to the admission of the cases, in order that suitable inquiries may be made on behalf of the Council into their financial circumstances. Unmarried expectant mothers who are destitute are dealt with by the Public Assistance Committee. Twenty cases were admitted to Homes during the year under arrangements of the Public Health Committee.

(xiv) CO-OPERATION WITH N.S.P.C.C.

In cases of neglect, etc., when visits of the Health Visitor fail to have any effect, the National Society for the Prevention of Cruelty to Children is called in and their Officer takes the cases up. Fourteen cases were so referred during 1937. The number of children concerned was fifteen, and forty-five visits were made by the Inspector. The Officer does not in any case divulge the source of his information, and he reports progress and discusses possible solutions of difficulties at regular intervals. This is a most useful form of co-operation.

(xv) PREVENTION OF BLINDNESS.

In October arrangements were made whereby children leaving school who were suffering from severe visual defects, particularly high myopia, were notified by the School Medical Department so that they could be kept under supervision by the Health Visitors. The latter will advise parents of children reported in this way to arrange for regular examination either by a private oculist or at an eye clinic.

Three cases were referred for supervision during the year.

(xvi) PREVENTION OF DEAFNESS AND DEAF-MUTISM.

Arrangements are made whereby (a) children under 5 years of age may be referred by medical practitioners to the aurists connected with Northampton General Hospital and the Horton General Hospital, Banbury : (b) operative treatment for the removal of tonsils and adenoids is available at Northampton General Hospital ; the Horton General Hospital, Banbury ; the Hospital of St. Cross, Rugby ; and the Stamford, Rutland and General Infirmary : (c) Nursing of infants suffering from ear defects is provided by the District Nurses of Associations affiliated to the Northamptonshire Nursing Association who have attended a course of instruction.

Children under 5 years of age who are suffering from ear defects are seen by T. F. Briggs, Esq., F.R.C.S., at the Ear, Nose and Throat Clinic at Horton General Hospital on the first Tuesday of each month at 2 p.m., on reference by a doctor and at Northampton General Hospital such cases may be referred to E. Broughton Barnes, Esq., F.R.C.S., in the usual way.

Twenty-nine cases have been referred to hospitals for operation.

(xvii) DENTAL TREATMENT AND DEFECTIVE VISION.

During the year, 79 expectant and nursing mothers and 216 children under five years of age who required dental treatment, and 81 children under five who required examination for defective vision, were referred to the Staff of the School Medical Department. In addition 17 County patients attending the Kettering Ante-Natal Clinic received dental treatment. Assistance towards the cost of dentures was given to three mothers.

(xviii) OBSTETRIC FACILITIES.

As stated earlier, under the heading of Puerperal Pyrexia, the County Council has arrangements with Mr. R. Watson, F.R.C.S. (Ed.), M.C.O.G. (Consultant Obstetrician), and his services are available to medical practitioners in cases of abnormality of pregnancy and in puerperal cases. Request is made through the Health Department (Telephone : Northampton 2219), or, in emergency, direct by the medical practitioner to the Consultant (Telephone : Northampton 3103) ; in the latter case, the Health Department should be notified immediately afterwards.

Fourteen cases were seen during the year at the request of private medical practitioners.

## (xix) CONTRACEPTION CLINIC.

The clinic of the Northampton Women's Welfare Association is held in the old Infant Welfare Centre premises in Dychurch Lane, Northampton, on the third Thursday (from 6.30 to 8.30 p.m.) and on the fourth Thursday (from 6.30 to 7.30 p.m.) of every month, except August and December. Appointments may be made for the attendance of suitable cases on application to Dr. M. Hendrie, Billing Road, Northampton, enclosing the necessary medical certificate stating the condition for which the advice is required. Appliances must be paid for by the patient. 15 County cases were seen under these arrangements during 1937.

## SECTION C.

### Sanitary Circumstances of the Area.

#### 1. WATER SUPPLY.

The following notes on water supplies have been extracted from the available reports of District Medical Officers of Health.

**Daventry Borough.** There have not been the difficulties over the supply as in former years, the increased rainfall has helped matters considerably, and the additional works put in during 1934 have also been of great assistance. Few complaints of any shortage have been received.

Two samples from private supplies were sent for analysis; one was reported to be satisfactory at the moment, but it was suggested that it should be kept under observation, and the other sample was unsatisfactory and the pump closed.

**Higham Ferrers Borough.** The rainfall for 1937 was well above the average for the past 34 years at Sywell and 30 years at Rushden.

The supply throughout the year was abundant and the quality good.

Samples of raw and filtered water were taken during the year and submitted to Dr. Greenburgh of Cambridge for chemical and bacteriological examination. The results were quite satisfactory. These remarks also apply to the water from the Wymington wells.

Work on the construction of the new Auxiliary Supply at Wollaston was commenced in August and at the end of the year under review considerable progress had been made.

**Burton Latimer Urban.** The Council now has an auxiliary supply from the Oundle and Thrapston Rural District Council's well at Woodford, and the Council commenced drawing from this on July 1st. Since then they have taken 3,544,200 gallons from this source; a daily average of 19,262 gallons.

The arrangement for an emergency supply from Kettering Urban District Council has now been terminated.

Three samples of water were analysed.

**Irthlingborough Urban.** The water treatment plant continues to operate satisfactorily. Samples of treated water have been bacteriologically examined on three occasions, no excremental organisms being found therein. The plate count has also been commendably low on each occasion. The Bacteriologist's reports state "the results are satisfactory for a public water supply."

**Kettering Urban.** The supply of water has throughout the year been satisfactory in quality and in quantity. The pressure filters, the slow sand filters and the chlorination plant at Cransley Reservoir are working efficiently as is also the small chlorination plant which deals with the supply to the village of Thorpe Malsor.

During the past 12 months 11,000,000 gallons of water were pumped from the Harrington supply to Thorpe Malsor Reservoir.

The construction of the Eye Brook Reservoir, authorised under the Corby (Northants.) and District Water Act, 1931, has been started and negotiations with regard to the quantity and character of water to be supplied to the Kettering Undertaking will shortly be commenced.

A new 2 in. main has been laid from the Headlands to the boundary of the Urban District and the supply is given, by arrangement with the Kettering Rural District Council, to premises in their area.



Samples of water from the town's mains and reservoirs were submitted regularly to the Council's Analysts and, with one exception, excellent reports were received. This particular report was due to abnormal weather conditions which included thunderstorms and further analyses made immediately afterwards showed that the water had regained its usual high standard of bacterial purity.

Samples of water from the Clover Hill well were examined and the reports from the Council's Analysts have confirmed the view that the water is of excellent bacteriological quality but is too hard for domestic use unless mixed with the reservoir waters. The Analysts also stated that the amount of free chlorine in the filtered water at Cransley should be adequate in order to ensure at all times an ample residue for sterilisation of the well water when mixed with the water from Cransley in the Clover Hill Reservoir in the event of such sterilisation being necessary.

**Oundle Urban.** There is an abundant supply of excellent, but hard water—29 degrees of hardness. A Base Exchange Water Softener has been installed, and water is now supplied at 10 degrees of hardness. Analyses of this have been uniformly good.

**Raunds Urban.** Below are copies of the conclusions of the Analyst in respect of two examinations of water samples. It can be seen that the analysis in the period of heavy rainfall is not quite so good as the analysis in the drier period. The Council has decided to instal filtration and chlorinating plant.

*Inference.* The results obtained on the analysis of this sample indicate a water containing very little organic matter though slightly contaminated with micro-organisms capable of giving a positive bio-chemical reaction for coliform bacilli.

I am of opinion that this water is safe for drinking purposes and recommend that the supply be kept under observation.

15th February, 1937.

(Signed) S. GREENBURGH,  
Public Analyst.

*Inference.* The results obtained on the analysis of this sample do not show any evidences of pollution.

I am of opinion that this water is fit for drinking purposes.

25th September, 1937.

(Signed) S. GREENBURGH,  
Public Analyst.

**Daventry Rural.** The Northern Regional Scheme which supplies water to the villages of Barby, Crick, Kilsby, Lilbourne, West Haddon, Winwick and Yelvertoft, with a population of 3,078 was completed during the year, and with the exception of a few minor difficulties during the first week or two, there has been a plentiful supply of good soft water ever since for all the seven parishes in the scheme.

The Southern Regional Scheme for providing Water Supply for the villages of Braunston, Watford and Welton, and augmenting the present supply for the parish of Long Buckby has proceeded somewhat slowly during the year. Great difficulties have been met with in making the final arrangements with the owners of the land required for carrying out the scheme ; however, these are being pushed forward as fast as possible.

The Weedon and Flore Scheme has proceeded satisfactorily ; by the end of the year contracts were let and the work well in hand, and there is little doubt that this supply of water will be available before the end of 1938.

The Byfield and Charwelton Water Supply was nearing completion at the end of the year, and the supply will be in use early in 1938.

Consideration of a supply for the Parish of Staverton was again before the District Council, and the possibility of obtaining water from Daventry Borough was receiving attention at the end of the year.

**Kettering Rural.** The proposed additional water tower and filtration plant for Corby are in hand. The water supply to Cranford has been completed, and appears to be satisfactory. It is to be extended to supply Grafton Underwood. 16 samples of water were analysed.

**Northampton Rural.** Roade supply obtained from the joint supply of Ashton and Hartwell was piped to the village and opened for use during the summer.

Harpole supply has been kept under careful observation during the year. Monthly tests as required by the Ministry of Health have been regularly made and these have proved the water to be of good quality.

**Oundle and Thrapston Rural.** The Brigstock well is surrounded by houses on three sides and a poultry farm on the other, and a series of analyses have not been quite satisfactory. Its situation makes the Brigstock well difficult to protect. The Benefield and Bulwick supplies have not given satisfactory analyses. The public piped supply at Easton is insufficient, and the method of delivery antiquated. A large number of sources of supply, piped or unpiped, makes sanitary control difficult and expensive. It is possible that the whole district, with the exception of Hargrave and Chelveston, which are cut off from the rest of the district by the Urban District of Raunds, could be supplied by three main systems—Woodford, Barnwell and Easton. The sources of the existing private piped supplies could be used as auxiliaries to augment the three main supplies in time of scarcity.

The Woodford and Thrapston water supplies were joined during the year by means of a pipe-line from Denford. Titchmarsh received an extension from Thrapston. The question of extending the water supply from Titchmarsh to Aldwinckle, Thorpe and Achurch was considered by the Council, but rejected for the present as it was estimated that there would be an Annual Deficit of about £115 0s. 0d. between income and loan charges, plus working expenses. These villages, however, are much in need of a supply, as all the wells are very shallow and liable to pollution. By reason of the unsatisfactory reports following analyses of samples taken during a very wet period in July, 1936, the Council installed Chlorinating Plant at the Woodford supply station, and has the intention, later, of installing filtration plant at an estimated cost of £1,700.

The Barnwell Regional Scheme to supply Barnwell, Clapton, Wigsthorpe, Hemington, Luddington, Luton, Polebrook, Thurning, and Warmington, was nearing completion at the end of 1937. The well is sunk in the river gravel in the Parish of Barnwell close to the boundary of Oundle Urban District, and the water is both filtered and chlorinated.

Benefield Supply has given several unsatisfactory analyses. In my opinion, the water is tapped too close to a stream into which the village sewage enters.

Glapthorn. All the public wells showed evidence of pollution. The water is safe for drinking purposes only if boiled.

Chelveston. This village is in need of a piped supply. It could get its supply most conveniently from the Raunds Urban District.

Northern Area.—Thirteen samples from public supplies were analysed : Ashton, Benefield, Blatherwycke (2), Bulwick (2), Collyweston, Easton-on-the-Hill, Fotheringhay, Glapthorn, Harringworth, Kings Cliffe, and Wakerley. Five only (Collyweston, Easton, Harringworth, Kings Cliffe and Wakerley) were returned as satisfactory.

Southern Area.—Eleven samples from public supplies were analysed : Aldwinckle (2), Brigstock (2), Caldecott, Sudborough, Thrapston (2), and Woodford (3). The Aldwinckle samples were unfit for drinking purposes, but the remainder were reported "good." Samples were also taken from a number of private wells, the results being uniformly bad.

**Towcester Rural.** It is hoped that the scheme which was approved by the Minister of Health and is now in progress at Paulerspury, will be completed by June, 1938. The scheme includes the erection of a concrete water tower, provision of pumping plant and the laying of mains throughout the village.



Samples of water were submitted for Chemical and Bacteriological Examinations, the results were as follows :—

Towcester	...	...	...	Chemical (4 samples)	}	Mod. Good
				Bacteriological (4 samples)		Safe
Silverstone						
New well at Housing Site	...			Chemical	}	Safe
				Bacteriological		Unsafe
New well at Housing Site	...			Chemical	}	Safe
(after cleaning)	...			Bacteriological		
Whittlebury Road	...			Chemical	}	Reas. Safe
				Bacteriological		Unsafe
Cattle End	...	...		Chemical	}	Reas. Safe
				Bacteriological		Unsafe
Chapel Hill	...	...		Chemical	}	Doubtful
				Bacteriological		
Little London	...	...		Chemical	}	Unsafe
				Bacteriological		
Blackwell	...	...		Bacteriological		Unsafe
Puddledock	...	...		”	”	”
Chapel Hill	...	...		”	”	Doubtful
Little London	...	...		”	”	”
Cattle End	...	...		”	”	”
Spring at Whittlebury Road				”	”	”
Paulerspury						
Plumpton End	...	...		”	”	”
Barrack Yard	...	...		”	”	”
Pury End	...	...		”	”	”
Pattishall						
Private Supply	...	...		”	”	Safe

#### General.

The County Council's policy of contributing, under Section 57 of the Local Government Act, 1929, towards the cost of approved schemes for the provision of public water supplies was continued during the year 1937, and on the coming into operation of the Public Health Act, 1936, was further continued under Section 307 (1) of that Act.

Grants were approved in respect of the following schemes :—

	<i>Estimated cost of scheme.</i>
DAVENTRY RURAL DISTRICT.	
Byfield and Charwelton (additional capital expenditure)	£750
KETTERING RURAL DISTRICT.	
Broughton (additional capital expenditure)	£814
Corby (additional capital expenditure)	£6,661
Cranford	£2,100
OUNDLE AND THRAPSTON RURAL DISTRICT.	
Regional Scheme* (additional capital expenditure)	£950
Titchmarsh	£570

\* for the parishes of Barnwell, Clopton, Hemington, Luddington, Lutton, Polebrook, Thurning and Warmington.



## 2. RIVERS AND STREAMS.

The rivers in the County all arise within the boundaries of the County. They are

Nene  
Welland  
Avon  
Cherwell, and  
Ouse.

Of these the Nene is the largest.

General supervision in the matter of prevention of pollution of the rivers and of the streams and brooks feeding them is maintained by the Health Department. Complaints of alleged pollution are investigated by a medical officer of the Department, and samples of river water are taken when necessary for chemical or bacteriological examination in the County laboratory.

Among the complaints of alleged pollution thus investigated were :

Deenethorpe Brook, owing to trade waste from Messrs. Stewarts and Lloyds, and to sewage effluent from Corby Sewage Works.

Piddington Brook, owing to sewage from Hackleton and Piddington.

The Department again participated in systematic hydrographical surveys which are carried out twice yearly throughout the length of the River Avon, by technical officers of the local authorities concerned. The results of the portion of the river bounding the County were satisfactory.

## 3. DRAINAGE AND SEWERAGE.

The following particulars as to sewerage and sewage disposal have been extracted from the reports received.

**Higham Ferrers Borough.** Steps will have to be taken in the near future to deal with the ever-increasing volume of sewage, and the exclusion of storm water.

**Burton Latimer Urban.** No improvements have been carried out to the Council's Sewerage Disposal Works during the year but the Council are now obtaining estimates for enlarging and reconstructing the works.

The small settling tanks were cleaned out twice during the year and the large tanks once.

**Irthlingborough Urban.** Work has been commenced on the construction of new disposal works where the sewage, including all trade wastes, will be treated in sedimentation tanks, and double filtration through percolating filters fed by revolving sprinkler arms. The treated effluent will then pass into the River Nene.

**Kettering Urban.** The Ministry of Health Inquiry into the Council's proposals for new Sewage Works and additional sewers was held during the year and formal sanction has been received authorising the purchase of the necessary land and the advertising of the contracts.

**Raunds Urban.** A short length of 9 inch diameter sewer was laid to serve the 32 new houses on the Stanwick Housing Site. This was the only extension of the sewerage system carried out during the year and no alterations or additions were made at the sewage disposal works at Raunds or Stanwick. A good quality effluent was obtained throughout the year.

**Daventry Rural.** On June 30th an Inquiry was held for permission to borrow the sum of £3,772 for Works of Sewerage and Sewage Disposal for the village of Welton ; at the end of the year a few details had still to be arranged.

At the same Inquiry permission was asked to borrow the sum of £535 for Sewerage Disposal Works at Byfield ; this work was well advanced by the end of the year.

On October 7th, the Minister of Health held an Inquiry for permission to borrow the sum of £18,500 for Works of Sewerage and Sewage Disposal for the Parish of Long Buckby ; this scheme was generally approved, but some details have still to be settled and the final arrangements over the land purchase completed.

On November 25th, another Inquiry was held for permission to borrow the sum of £5,718 for similar works for the Parish of Kilsby and this scheme has generally been approved ; the site of the Sewerage Disposal works can also be made suitable to include the Parish of Barby when required.

**Kettering Rural.** The extensions to the Sewage Farm and land for sludge treatment at Corby are in progress. The Septic Tanks at 17 villages were cleaned out.

The complaint as to trade refuse into the Weldon brook was dealt with by Messrs. Stewarts and Lloyds cleaning out the brook.

**Northampton Rural.** The chief work was the Valley sewer draining the areas of Weston Favell and Billing extending up into the Brixworth area, Moulton district. An Inquiry was held on 27th July by the Ministry of Health. The terminus of this sewer is being carried into the Northampton Borough Sewage Farm at Billing.

**Oundle and Thrapston Rural.** Thrapston has now a piped water supply and there has been a considerable increase in the number of habitable houses. The sewage system is becoming more inadequate. The result is that the river Nene is becoming more and more polluted.

Now that Titchmarsh has a piped water supply, consideration should be given to the installation of a proper sewage system with treatment of the sewage before allowing it to enter a watercourse.

Denford. This village has now a piped water supply and consideration should be given to proper sewerage and sewage treatment system.

Aldwinckle. In this village there are only sewage outfalls. A piped water supply is badly needed in the village.

The sewage treatment works for Chelveston is so situated as to be quite useless for its purpose in times of even moderate rainfall by reason of flooding of the filtration beds. In Caldecott the waste from 20 houses enters a street drain and ends in ditches.

Hargrave. The waste from 39 houses in High Street, Church Street, and Moor Lane enters a common street drain and thence directly to the brook, while 16 houses in another part cause the waste to go directly into the brook. 4 houses in Moor Lane possess a common cesspool. There are 3 septic tanks accommodating private houses. This village now possesses a piped water supply.

Warmington. All areas discharge the sewage into the ordinary watercourse without treatment. This village now possesses a piped water supply.

Easton-on-the-Hill. Chiefly cesspools, really "soakaways," and many situated in limited spaces. Serve some 200 houses. Worst feature is the open paved street channel in Bell Street, The Lane, and Church Street (part), into which discharges the sewage of some 20 houses, and thence into watercourse.

King's Cliffe. Partly cesspools, again "soakaways," and situated in narrow areas. Serve some 100 houses. Remainder storm-water sewers which discharge into the Willow Brook at points from West Street (3), The Mill, and Bridge Street—some 140 houses. A cesspool in Park Street supplies 10 houses.

With a *few* exceptions all sewage is discharged into the watercourse *untreated*.

**General.**

The County Council agreed during the year 1937 to grant assistance under Section 57 of the Local Government Act, 1929, and Section 307(1) of the Public Health Act, 1936, towards the cost of the following schemes of sewage disposal :—

	<i>Estimated cost of scheme.</i>
BRACKLEY RURAL DISTRICT.	
Kings Sutton (additional capital expenditure)	£2,660
DAVENTRY RURAL DISTRICT.	
Kilsby	£5,718
Long Buckby	£18,500
Welton	£3,772
KETTERING RURAL DISTRICT.	
Corby (additional capital expenditure)	£814
TOWCESTER RURAL DISTRICT.	
Furtho, Cosgrove and Passenham	£8,799

**4. CLOSET ACCOMMODATION.**

At the date this Report was completed, only 12 Annual Reports of District Medical Officers of Health had been received. From these it was ascertained that the number of privies (middens) and pail or earth closets converted to the water-carriage system during the year amounted to 101.



## SECTION D.

### Housing.

#### RURAL HOUSING, 1937.

The duty of every County Council in respect of rural housing is now contained in Section 88 of the Housing Act, 1936, which provides—

“ It shall be the duty of the council of every county, as respects each rural district within the county, to have constant regard to the housing conditions of persons of the working classes, the extent to which overcrowding or other unsatisfactory housing conditions exist and the sufficiency of the steps which the council of the district have taken, or are proposing to take, to remedy those conditions and to provide further housing accommodation.

The council of every rural district shall at such intervals, not being in any case less than one year, as the county council may direct, furnish to that council such information with regard to the matters mentioned in the foregoing subsection as the county council may reasonably require for the purpose of enabling them to carry out their duties thereunder.”

The terms of Section 88 of the new Act are practically identical to those of Section 32 of the Housing Act, 1930.

A summary of the returns from the Rural Districts in relation to housing progress during the year is shown on ~~the opposite~~ page. 49

To evaluate the progress made in 1937 it is necessary to go back for a few years. At the end of the year 1935 the returns from the Rural District Councils of houses dealt with between 1st January, 1931, and 31st December, 1935, under the Housing Act, 1930 (Sections 1 and 19) showed that 1,363 dwellings had been condemned and that 120 of these had been closed and in addition 143 actually demolished.

A housing survey of the rural areas of the County carried out by the medical staff of the Public Health Department in the Winter of 1935-36 showed that there were 5,175 houses unfit for human habitation. These 5,175 houses included houses already condemned by the Rural Councils, since the object of the survey was to provide an accurate statistical record of unfit houses quite apart from any action taken with regard to them by local authorities. From the 5,175 houses we can, therefore, deduct 1,363 minus the 263 houses closed or demolished before the end of 1935, *i.e.*, 1,100, leaving 4,075 houses which had not been dealt with at the time of the County Medical Officer's survey.

At the end of 1936 a further 614 houses had been dealt with by the Rural Authorities either by Clearance Orders or Demolition Orders.

The returns for 1937 show that 520 houses were pronounced unfit and included either in Clearance Orders or Demolition Orders. Adding the 1936 and 1937 returns, there are 1,134 houses condemned during the two years, and deducting this number from the 4,075 houses found to be unfit in 1935-36 and in regard to which no action had been taken, we are left with a total of 2,941 unfit houses still requiring to be scheduled.

The housing survey of 1935-36 covered 254 villages with a total of 28,192 houses. We are forced to admit then that at the end of 1937 about ten per cent. of the houses in rural Northamptonshire were unfit and had not been dealt with by the Housing Authorities.

It was the hope of the Government interpreting the strong desire of the nation that the end of 1938 would see the completion of the slum clearance campaign. At the present rate of progress—about 570 houses being scheduled per annum—at least five more years will be required

before the rural housing authorities have included all uninhabitable houses in Clearance or Demolition Orders, and meantime much property on the borderline is being allowed to deteriorate and fall into the unfit category.

The progress during the last two years is certainly more rapid than in the five years 1931-35, largely due to energetic action on the part of a few authorities. Towcester Rural District Council for example, has shown that the difficulties so frequently put forward in extenuation—difficulties in relation to securing suitable sites, etc.—can be successfully overcome.

With regard to houses built, the returns for 1937 show that 257 houses were constructed, compared with 211 during 1936. These figures should be considered in relation to the fact that the survey of 1935-36 revealed 5,175 unfit houses in the rural areas of the County. Some improvement should, however, be seen in the results for 1938, judging by the fact that at the end of 1937, 523 houses were in course of erection and tenders had been accepted for a further 134.

A certificate of reconditioning under Section 51 was given in respect of only five houses as compared with 35 in 1936.

Holt, in his *Diseases of Infancy and Childhood*, which is one of the best known text-books on the subject, opens his first chapter with the following: "The physical development of the child is essentially the product of the three factors—inheritance, surroundings and food. The first of these it is almost beyond the physician's power to alter, the second is largely and the third almost entirely within his control. . . ." These are the words of an eminent physician surveying his subject from the clinical standpoint.

It is an axiom of preventive medicine that a decent house with reasonable amenities is essential for adequate physical development and health. Of what avail is it for the Medical Officer at the Maternity and Child Welfare Centre to teach the essentials of babycraft if the mother has to return to an insanitary dwelling? To what purpose does the school doctor or the teacher advance the cause of hygiene if the pupils live in condemned houses? To what end does the Tuberculosis Officer send his patients to sanatoria if he finds that they return to the insanitary conditions which were in part at least responsible for the disease? Is a National Fitness Campaign any other than lip service to a popular cause as far as concerns people still compelled to inhabit unfit dwellings? All this has been said before time and time again: it is regrettable that it has still to be repeated anew.

### HOUSING (RURAL WORKERS) ACTS, 1926-35.

To complete this section on Rural Housing the following information, for which I am indebted to Mr. R. George, the County Land Agent, is added. The number of houses approved for grants under the Housing (Rural Workers) Acts in the ten years 1927-36 was 162. In 1937 the houses approved for grants numbered 111, which shows a very gratifying increase. Grants have been made in the various County districts since 1st April, 1935 (the date upon which the Revision of County Districts became operative), as follows :—

<i>District.</i>		1935 (9 months)	1936	1937	<i>Total.</i>
Brackley Rural ...	...	—	—	4	4
Brixworth Rural ...	...	1	1	18	20
Daventry Rural ...	...	—	4	12	16
Kettering Rural ...	...	—	16	6	22
Northampton Rural	...	—	—	41	41
Oundle and Thrapston Rural		11	—	11	22
Towcester Rural ...	...	2	—	10	12
Wellingboro' Rural	...	—	8	9	17

The figures in respect of houses approved for grants do not affect to any material extent the statement previously made that at the end of 1937 about ten per cent. of the houses in rural districts were unfit and had not been dealt with by the housing authorities. The 5,175 houses classed as uninhabitable in the survey of 1935-36 included only houses which in the opinion of the inspecting officers could not be rendered fit at reasonable expense, having regard to the value of the property. Doubtless some cottages grouped in the survey as incapable of being rendered fit at reasonable expense have been reconditioned under the Housing (Rural Workers) Act, but the number cannot be great.



# HOUSING ACT, 1936.

District.	Action taken under Section 25. CLEARANCE AREAS.		Action taken under Section 11. DEMOLITION OF INSANITARY HOUSES.		Number of houses constructed between 1st January & 31st Dec.	Number of houses in course of erection, but not com- pleted at end of year.	No. of houses for which ten- ders were accepted on or before 31st December, but which were not com- pleted or in process of erection on that date.	Number of houses for which cer- tificates of recondition- ing under Sect. 51 were issued.
	Number of houses affected. *	Number closed or demolished. †	Number of houses affected. *	Number closed or demolished. †				
Brackley Rural	106	—	3	—	23	10	14	—
Brixworth Rural	26	—	—	2	76	46	—	5
Daventry Rural	185	—	—	—	60	18	—	—
Kettering Rural	21	—	13	—	—	19	—	—
Northampton Rural	—	—	—	—	—	88	120	—
Oundle and Thrapston Rural	42	7	47	1	18	28	—	—
Towcester Rural	69	54	8	12	64	291	—	—
Wellingborough Rural	—	—	—	—	16	23	—	—
TOTALS	449	61	71	15	257	523	134	5

*Note.*—\* The figures in these columns relate only to houses scheduled by the local authority during the year 1937.  
† The houses referred to in these columns may have been scheduled in 1937 or in previous years. Further the figures do not include houses returned as demolished in 1937 but which were shown in returns for previous years as having been closed.

## SECTION E.

### Inspection and Supervision of Food.

#### 1. MILK SUPPLY.

In pursuance of their powers under the Milk (Special Designations) Order, 1936, the County Council granted licences for the production of Tuberculin Tested Milk in 6 cases, and Accredited Milk in 61 cases, during the year 1937. In the same period, 3 Tuberculin Tested and 11 Accredited Producers relinquished their licences or removed, so that at the end of the year there were 18 Tuberculin Tested and 275 Accredited licences in force in the County. Of these, 5 Tuberculin Tested and 19 Accredited Producers bottled their milk on the farm.

Of the 18 Tuberculin Tested herds in the County, 5 were, at the end of the year, entered in the Register of Attested Herds kept by the Ministry of Agriculture and Fisheries. To qualify for a Certificate of Attestation the producer must show the Ministry of Agriculture that the management of the herd and the conditions in which it is kept are in accordance with the requirements of the Tuberculosis (Attested Herds) Scheme, 1937, and also furnish evidence that the herd has passed two tuberculin tests without reactors being found. A third or official Tuberculin Test must also be passed by all the animals in the herd. An Attested Herd is, therefore, one which is officially certified by the Ministry of Agriculture as free from tuberculosis.

The supervision of methods of handling and producing designated milk was carried out by members of the medical staff in the department and by the Assistant Bacteriologist. In some areas the aid of the District Council's Sanitary Inspector was enlisted for the collection of samples of Tuberculin Tested Milk. Samples are taken from Tuberculin Tested Producers at fortnightly intervals throughout the Summer and monthly during the rest of the year. In the case of Accredited Producers, efforts are made to carry out inspections and collect samples quarterly, but this is not possible in every case.

During the year, 169 samples of Tuberculin Tested Milk were collected for examination at the County Laboratory and 155, or 91 per cent. were in conformity with the standard laid down in the Milk (Special Designations) Order, 1936.

In the case of Accredited Milk, 601 samples were examined, and 467 or 77 per cent. were satisfactory.

Where conditions are found to be unsatisfactory, or samples examined do not comply with the requirements of the Order, re-inspections are made and further samples are taken until the conditions become satisfactory.

After a licence has been granted, the quarterly clinical examination of the herd, and also, in the case of Tuberculin Tested herds, the double intradermal test, are now carried out free of charge to the producer, and there is no charge either for the examination of any milk samples taken after the licence has been issued.

It was not found necessary during the year under review to bring before the Public Health, etc., Committee any case with a view to their suspending or revoking the licence to produce designated milk.

From the figures given above, it will be seen that the number of Northamptonshire farmers producing designated milk was 293 whereas there were estimated to be 1,900 milk producers in the County. Out of the remaining 1,600 producers of non-designated milk only about 20 were known to be making efforts to bring premises and methods up to the standard required for the production of designated milk and further applications for inspection were being received at an average rate of one per week.

There are no rigid requirements as regards premises in this County, each case being considered on its merits, although good impervious floors and adequate light and ventilation of cowsheds are essential. As regards premises, the County standard in general follows the provisions contained in Part V. of the Milk and Dairies Order, 1926. Close attention, however, is paid to methods of production, and scrupulous cleanliness of premises, animals and milkers is expected and insisted upon. The Minister of Health advises that steam sterilization of utensils and containers is necessary and although producers with 10 cows or less are allowed to use a copper provided it is not employed for any other purpose, those with larger herds must instal steam sterilizers and use them regularly after each milking.

The cleanliness of our milk supplies is of importance from the Public Health standpoint apart altogether from the question of safety, and it is hoped that the increased bonuses available under the Milk Marketing Board's Scheme will result in the production of larger quantities of designated milk. The public has a right to insist that milk, in common with all other foodstuffs, should attain a reasonably high standard of cleanliness.

#### MILK AND DAIRIES (CONSOLIDATION) ACT, 1915.

Only one case came under consideration during the year. A sample of milk taken in the Borough of Watford from a supply from a farm at Kislingbury was stated to have shown, on examination, acid fast bacilli indistinguishable from tubercle bacilli.

A veterinary inspection was made of the dairy cows (11) on the farm, and a sample was taken from one cow that was regarded as suspicious, and also five mixed samples from the remaining ten animals. All the samples proved negative on biological examination.

#### MILK AND DAIRIES ORDER, 1926.

The arrangements for the examination of dairy cattle to provide quarterly visits over the whole County were continued as in the year 1936, and this allows the necessary quarterly certificates to be issued to holders of licences authorised to produce milk under the Milk (Special Designations) Order, 1936.

The veterinary inspectors' reports show that generally the health and condition of the cows was satisfactory, although as far as their cleanliness was concerned, the inspector for the Wellingborough Joint Dairies Committee suggests that, in some instances, there was room for improvement.

Much attention has been paid to cowsheds and there has been generally little cause for complaint.

With regard to the efforts to ensure a wholesome milk supply, the following extract from the Report of the veterinary inspector for the Kettering Joint Dairies Committee is given.

#### **Kettering Joint Dairies District.**

The practice carried out by the Sanitary Officials of submitting samples of market milk for bacteriological examination has been continued on a progressively larger scale with, I think I may say, less satisfactory or convincing results to the Committee.

This is due to the substitution of the methylene blue reaction test in place of the bacterial plate count formerly employed, bacteriologists having decided that the last-named method possesses a very wide margin of error.

Examination of the reports on the last 284 samples forwarded to the Laboratory for examination for bacterial contamination shows that 154 have been certified as good, 20 as moderate, and 110 as bad.



Practically the whole of the samples certified as bad, however, are confined to those examined during the hot summer months, the index rising or falling consistently in accordance with the seasonal temperatures.

The Veterinary Inspectors took 143 samples of milk for biological examination for tubercle bacilli, six of which proved positive.

In addition, 1,393 samples were taken by the Sanitary Inspectors for examination for bacterial cleanliness by the methylene blue test at the County Laboratory ; these gave the following results :

- “ Good ”—808 or 58.0%.
- “ Moderate ”—196 or 14.0%.
- “ Bad ”—389 or 28.0%.

The following table gives a list of inspections carried out during the year, and shows the number of cows destroyed on account of tuberculous infection :—

INSPECTION OF DAIRY COWS AND COWSHEDS.

	No. of Inspections and re-inspections of premises.	Number of Inspec- tions of cows.	* Number of cows with Tuberculosis (including Tuberculosis of the Udder).	Number of cows with “ scheduled diseases ” under the Milk & Dairies (Consolidation) Act, 1915, or the Milk & Dairies Order of 1926.
PETTY SESSIONAL DIVISIONS.				
Brackley .....	752	10269	—	4
Daventry .....	870	9633	—	33
Little Bowden .....	307	5210	14	6
Northampton .....	1196	16114	8	79
Oundle .....	457	4350	—	16
Thrapston .....	372	3681	—	15
Towcester .....	931	11364	4	10
DISTRICTS.				
Higham Ferrers Borough .....	28	246	—	2
Irthlingborough Urban .....	29	152	—	—
Kettering Joint.....	608	7503	14	133
Rushden Urban .....	70	460	—	3
Wellingborough Joint .....	380	5353	6	46

\* These cows were destroyed under the provisions of the Tuberculosis Order, 1925.

2. MEAT AND OTHER FOODS.

Public Health (Preservatives in Food) Regulations, 1925-27.

Of the 551 samples submitted for analysis under the Food and Drugs (Adulteration) Act, 1928, 473 were examined for the presence of a preservative, and, of these, 5 samples of Sultanas contained Sulphite preservative, only one sample containing a slight excess over the amount permitted. The vendor was warned and the remaining stock was returned to the wholesaler.

One sample of Pork Sausages contained 0.1 per cent of Boric Acid, a preservative which is strictly prohibited. The vendor was prosecuted, a fine of 10/- being imposed. Another sample of Pork Sausage contained Sulphur Dioxide within the prescribed limits, and it was properly declared.

Two samples of Lemon Squash, one of Orange Squash and one of Beer contained Sulphite preservative, the quantity in each case coming well within the prescribed limits.

A sample of Raisin Wine, a non-alcoholic beverage, contained Benzoic Acid within the permitted amount.

### 3. ADULTERATION, etc.

#### FOOD AND DRUGS (ADULTERATION) ACT, 1928.

During the year, 551 samples were taken by the Inspectors of Food and Drugs for analysis by the County Analyst, Mr. E. Voelcker. Of these, 434 were taken formally, 59 being adversely reported upon, and 117 were informal samples, 9 of which were reported against.

The percentage of unsatisfactory samples, 12.3 is somewhat higher than in 1936 when the percentage was 10.2.

The total list is as follows :—

Milk .....	351	Raisins .....	1
Skimmed Milk .....	2	Ground Almonds .....	3
Separated Milk .....	8	Mincemeat .....	2
Cream .....	12	Boiled Sweets .....	1
Tinned Cream .....	8	Demerara Sugar .....	1
Condensed Skimmed Milk ...	17	Strawberry Syrup .....	1
Condensed Full Cream Milk	1	Marmalade .....	2
Butter .....	30	Black Currant Jam .....	3
Margarine .....	7	Raspberry Jam .....	3
Cheese .....	2	Apricot Jam .....	1
Lard .....	4	Honey .....	1
Lard Substitutes .....	3	Strawberry Jam .....	1
Dripping .....	1	White Pepper .....	3
Shredded Beef Suet .....	2	Sage & Onion Stuffing .....	1
Ice Cream .....	5	Mint .....	1
Real Cream Ice .....	1	Tinned Tomatoes .....	3
Chocolate Cake .....	1	Tinned Salmon .....	1
Chocolate Swiss Roll .....	3	Tomato Puree .....	1
Sponge Cake .....	1	Fish Paste .....	2
Bread .....	1	Tea .....	4
Self-Raising Flour .....	3	Coffee .....	1
Flour .....	2	Coffee and Chicory .....	1
Cake Mixture .....	2	Cocoa .....	1
Ground Rice .....	1	Pork Sausages .....	4
Table Jellies .....	3	Beef Sausages .....	1
Worcester Sauce .....	1	Luncheon Sausage .....	1
Pikanti Sauce .....	1	Roast Chicken and Ham .....	1
Sauce .....	1	Grape Fruit Tonic.....	1
Mustard Sauce .....	1	Lemon Squash .....	2
Prepared Mustard .....	1	Orange Squash .....	1
Salad Cream .....	1	Beer.....	1
Horseradish Cream .....	1	Raisin Wine .....	1
Vinegar .....	2	Cowslip Wine .....	1
Malt Vinegar .....	4	Tincture of Iodine.....	1
Sultanas .....	5	Chocolate Laxative .....	1
Currants .....	2	Borax .....	1
Health Salts .....	2	Glycerine .....	1
Compound Lemon Glycerine and Honey.....	1		551

67.7 per cent. of the total samples taken were of milk and of cream, 63.7 per cent. being of new milk.

Particulars of action taken in the cases reported against are dealt with in the Report on the work of the Inspectors of Food and Drugs :—

#### REPORT OF THE WORK OF THE INSPECTORS OF FOOD AND DRUGS.

Of the 351 samples of milk (which included 20 “ appeal-to-cow ” samples) taken during the year, 56, or approximately 16 per cent, were unsatisfactory, 31 of these being deficient in fat.

Mention has been made in previous reports as to the variety of causes to which fat deficiencies may be attributed and that the difficulties of producers are realised is shown in the fact that no legal action was taken in any of the 31 cases.

Failure to mix completely the milk of a herd, incomplete milking, uneven periods between the morning and evening times of milking, weather and seasonal conditions, each have a decided effect on the fat content of milk.

The months of May and June again produced the greatest number of samples deficient in fat, no less than 22 of the 31 being taken during this period.

The average fat content of the milk samples (excluding samples containing added water) taken during the year was 3.58 per cent., and varied in the different seasons of the year as follows :

First quarter .....	3.58 per cent.
Second quarter .....	3.24 per cent.
Third quarter .....	3.42 per cent.
Fourth quarter .....	3.77 per cent.

Seventeen samples contained added water in amounts ranging from 5.6 per cent. to 22.8 per cent :—

15.2 per cent Added Water	}	Samples taken from four churns on delivery from one supplier. An inclusive fine of £10/-/- was imposed.
10.7     ,,     ,,     ,,		
21.6     ,,     ,,     ,,		
11.6     ,,     ,,     ,,		
17.6     ,,     ,,     ,,	}	Samples taken from four churns on delivery from one supplier. Proceedings were instituted on the 17.8 per cent. added water sample this being from a mixture of the whole consignment. Fined £20/-/- and £9/5/- costs.
19.6     ,,     ,,     ,,		
17.4     ,,     ,,     ,,		
20.4     ,,     ,,     ,,		
17.8     ,,     ,,     ,,		
20.7     ,,     ,,     ,,	}	These two samples were collected at the farm from which the samples referred to in the previous case were supplied. A cowman at this farm was charged under the Milk and Dairies (Amendment) Act, 1922, with adding water to milk intended for sale, and was fined £2 in each of the two cases and was ordered to pay £3/18/6 special costs. The two churns sampled belonged to two other farmers who were not concerned in the above case but used the same farm buildings.
22.8     ,,     ,,     ,,		
7.0     ,,     ,,     ,,	}	Samples taken from four churns on delivery from one supplier. Proceedings were instituted on the 8.0 per cent. added water sample, this being from a mixture of the whole consignment. Defendant pleaded “ guilty ” and was fined £5.
16.7     ,,     ,,     ,,		
6.9     ,,     ,,     ,,		
5.8     ,,     ,,     ,,		
8.0     ,,     ,,     ,,		



In the one other case of added water, 5.6 per cent., the evidence obtained very strongly suggested that the retailer was being supplied with adulterated milk. The circumstances were such that the necessary evidence against the supplier could not be obtained. The retailer, who had a long and excellent record as a milk seller was not proceeded against.

The remaining 8 samples reported against shewed slight deficiencies in solids-not-fat, but the Analyst reported that there was no evidence of the presence of added water. "Appeal" samples confirmed that the cows were giving milk below the required standard.

Two samples of tinned cream were found to be slightly below the stated content of butter-fat. Such a statement is not obligatory and the samples would, apart from the statement, have been entirely satisfactory. As the fat deficiencies were as low as 0.41 per cent. and 0.39 per cent. respectively, no action was taken. Further samples were satisfactory.

An informal sample of Margarine contained 0.3 per cent. of water in excess of the 16 per cent. allowed. A formal sample was satisfactory and no action was taken.

The County Analyst reported an improvement in the chocolate content in the samples of Chocolate Swiss Roll submitted, but in two cases the quantity of dry fat-free Cocoa material was below the suggested minimum of 4 per cent., the amounts being 2.6 and 3.6 per cent. respectively. The attention of the manufacturers was drawn to the suggested minimum of chocolate material required to be found in Chocolate Swiss Roll, but no legal action was taken.

One sample of Vinegar was found to contain slightly less Acetic Acid than the recognised minimum of 4 per cent. The deficiency being 0.2 per cent, no action was considered warranted.

An informal sample of Tomato Puree was reported to contain 9.8 grains per lb. of tin, and, on this account was condemned as unfit for human consumption. The circumstances were that this article was not normally stocked by the retailer and on a visit being paid to procure a formal sample, only one small tin remained, which did not constitute a sufficient amount for a formal sample. Enquiries have been made from time to time as to any other stocks of this article, but they have so far failed to show that there is any demand or sale therefor.

The percentage of samples reported against and the results of action taken are shewn in the following table :—

<i>Year.</i>	<i>Samples submitted for analysis.</i>	<i>Cases reported against.</i>		<i>Amount of fines and costs in prosecutions.</i>
		<i>Number.</i>	<i>Percentage.</i>	
1933	532	50	9.4	£10 0 0
1934	538	72	13.1	£5 17 0
1935	531	57	10.7	£16 18 6
1936	596	61	10.2	£3 11 6
1937	551	68	12.3	£52 13 6

#### **Public Health (Condensed Milk) Regulations, 1923-1927.**

Eighteen samples were taken for analysis and of these, two were slightly deficient in solids. The deficiencies, however, were not sufficiently serious for any action to be taken.

#### **Public Health (Dried Milk) Regulations, 1923-27.**

No action was taken.

#### **Artificial Cream Act, 1929.**

No action was taken.

## SECTION F.

### Prevalence of, and Control over, Infectious and other Diseases.

#### 1. ISOLATION HOSPITAL ACCOMMODATION.

The Scheme under Section 63 of the Local Government Act, 1929, was described in last year's report.

During the year correspondence was conducted between the Ministry of Health, the Oundle Urban District Council, the Oundle and Thrapston Rural District Council, the Oundle Joint Isolation Hospital Board and the County Council, with regard to the retention of the Oundle Isolation Hospital.

#### 2. INFECTIOUS DISEASES AND VACCINATION.

**Smallpox.** No case was notified in the County during the year 1937, nor was information received from any outside Authority as to contacts proceeding to this County.

**Vaccination.** The statistics of vaccination for 1936 (the latest year available) show a fractional increase in the number of successful vaccinations in the Administrative County, the percentage of successful vaccinations to registered births being 9.9 as compared with 9.7 for the year 1935. The highest percentages of vaccinations were in the districts of Brackley (18.6) and Towcester (16.4), and the lowest in the districts of Wellingborough (4.4) and Kettering (8.5).

**Scarlet Fever.** 269 cases were notified, showing a decrease of 165 as compared with the year 1936. Cases occurred each week—with the exception of one week—and over 67 per cent. of the total cases were notified in the second half of the year. The highest number of cases occurred in the following Districts :—Kettering Urban 44, Wellingborough Urban 39, Kettering Rural 26, Towcester Rural 24, Brixworth Rural 23, Brackley Rural 22. No District was entirely free of the disease. There were three deaths, giving a mortality rate per 100 notified cases of 1.11, as against 0.92 in the year 1936.

**Diphtheria.** There was a pleasing decrease in the number of notifications as compared with the year 1936,—70 as against 144. These were distributed over ten Districts, the highest numbers occurring in Brixworth Rural (26) and Daventry Rural (21). There was one school closure. 63 per cent. of the total cases occurred in the second half of the year. There were eight deaths, giving a mortality rate per 100 notified cases of 11.4 as against 4.1 in the year 1936.

**Enteric Fever.** This disease showed a considerable diminution in notifications, there being eleven cases (inclusive of 8 paratyphoid) as against 41 in the year 1936. These cases were distributed over seven Districts. There was one death, as against four in the year 1936.

**Erysipelas.** 66 cases were notified as against 68 in the year 1936.

**Measles.** There were a few cases of Measles in the Oundle Urban District, and the Welford and Sulby School was closed in consequence of an outbreak. There was one death.

**Whooping Cough.** Eight deaths occurred, as against seven deaths in the year 1936. Ashby St. Ledgers School was closed on account of an outbreak.

**Chicken-pox.** No intimation of cases of Chicken-pox having occurred was received from any District Medical Officer of Health.

**Diarrhoea and Enteritis** (under 2 years of age). There were six deaths, as against five in the year 1936.



**Puerperal Pyrexia : Puerperal Fever : Ophthalmia Neonatorum.** These diseases are dealt with under " Maternity and Child Welfare " in Section B. of this Report.

**Influenza.** The mortality from Influenza was greater than in normal years, there being 109 deaths as compared with 35 deaths in 1936.

The County did not escape the epidemic of Influenza which passed over England in the early weeks of 1937. Approximately three-quarters of the deaths occurred in persons over 54 years of age.

**Pneumonia** (Acute Primary and Acute Influenzal). 189 cases were notified as against 144 cases in the year 1936. 114 were in the Urban Districts and 75 in the Rural Districts. With the exception of five weeks, cases occurred in each week of the year, 54 per cent. being notified in the first Quarter.

The deaths from *all forms* of Pneumonia amounted to 100, as against 97 in the year 1936. The Rural Districts had 58 deaths and the Urban Districts 42 deaths.

**Acute Poliomyelitis.** Two cases were notified and there was no death, as against four cases and no death in the year 1936.

**Cerebro-Spinal Fever.** Five cases were notified and there were three deaths, as against two notified cases and three deaths in the year 1936.

**Encephalitis Lethargica.** Two cases were notified and there were five deaths as against one notified case and no death in the year 1936.

**Acute Polio-Encephalitis.** There were no cases or deaths during the years 1937 and 1936.

**Malaria.** No case was notified.

**Mumps.** There was some prevalence of Mumps reported from the Oundle Urban District.

**Dysentery.** One case was reported from the Kettering Rural District.

(Remarks in above paragraphs as to School Closure do not apply to schools in the Kettering Urban District, which is its own Elementary Education Authority.)

**Home Nursing of Infectious Cases.** In addition to cases of Puerperal Fever, Puerperal Pyrexia, and Ophthalmia Neonatorum, the following cases were nursed in their homes, under the arrangements of the County Council :—Influenza 347, Pneumonia 122, Infantile Diarrhoea 35, Measles 27, Whooping Cough 9, Chicken-pox 7, Tuberculosis 22, Encephalitis Lethargica 1, Pemphigus 7, Rise of temperature 48, Discharging eyes 67, Thrombosis of leg 3, Breast abscess 2.

### 3. CANCER.

The facilities for treatment in the County were described fully in the last Annual Report.

The total deaths in the Administrative County from Cancer during the year 1937 amounted to 345 (175 males and 170 females), as compared with 357 in the year 1936. The Urban Districts had 167 deaths and the Rural Districts had 178 deaths.

The death-rate for the County during 1937 was 1.56 per 1,000 of the population as against 1.63 for England and Wales.

### 4. TUBERCULOSIS.

During the year the Tuberculosis Nurse resigned, having reached retiring age, and the opportunity was taken of appointing in her place an additional Health Visitor. The dispensary duties formerly performed by the Tuberculosis Nurse are now shared by several Health Visitors ; the home visiting of tuberculous patients is, of course, carried out in their respective districts by all the Health Visitors.

The following figures compiled from the Returns of the District Medical Officers of Health, show the position of the County as regards existing cases of Tuberculosis at the end of the year 1937.

<i>Pulmonary.</i>			<i>Non-Pulmonary.</i>			<i>Total Cases.</i>
<i>Males.</i>	<i>Females.</i>	<i>Total.</i>	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>	
517	462	979	176	169	345	1,324



Particulars of new cases of Tuberculosis and of all deaths from the disease in the area during 1937 are shown below :

AGE PERIODS.	NEW CASES.				DEATHS.			
	PULMONARY.		NON-PULMONARY.		PULMONARY.		NON-PULMONARY.	
	M.	F.	M.	F.	M.	F.	M.	F.
0 ... ..	—	—	3	—	—	—	4	1
1 ... ..	2	—	4	3	2	—	1	2
5 ... ..	3	—	6	8	—	—	2	3
10 ... ..	1	1	12	6	—	—	—	—
15 ... ..	13	16	5	6	7	9	4	1
20 ... ..	15	16	2	5	—	—	—	—
25 ... ..	22	24	6	2	13	15	2	1
35 ... ..	20	12	1	4	8	10	1	1
45 ... ..	14	6	—	3	10	2	1	1
55 ... ..	12	5	—	1	11	4	—	—
65 and upwards ...	2	1	—	—	2	1	—	3
TOTALS ...	104	81	39	38	53	41	15	13

Eleven (or 9 per cent.) of the total deaths from Tuberculosis, and fourteen new cases, were not notified in this Administrative County ; in respect of eight deaths the information was obtained from the local Registrars' returns, and there were three posthumous notifications. The fourteen new cases were transfers from other areas. The non-notifications in the fatal cases were enquired into, and the explanations furnished were, assumed cases were previously notified (4), tuberculosis not definitely proved until after post-mortem (3), and in one case unable to trace medical practitioner who attended patient.

The total primary notifications of Tuberculosis during the year 1937 amounted to 237—111 in the Urban Districts and 126 in the Rural Districts. Of this number, 167 were suffering from respiratory forms of the disease and 70 from other forms of Tuberculosis. There were 33 more primary notifications during 1937 than for the year 1936. Table III. in the Statistical Section shows the number of cases notified in each District.

There was no evidence of excessive incidence of tuberculosis in any particular occupation in the County. Persons engaged in the Boot and Shoe Industry, however, accounted for 14 per cent. of the notifications, which is not an excessive proportion since the industry is the principal one in the County.

**Mortality.** Respiratory—During the year 1937, 94 deaths (53 males and 41 females) occurred, 59 of which were in the Urban Districts and 35 in the Rural Districts.

Other Forms—Twenty-eight deaths occurred from other forms of the disease (15 males and 13 females)—11 in the Urban Districts and 17 in the Rural Districts.

There were thus 122 deaths from all forms of Tuberculosis as compared with 117 deaths in 1936. The mortality rate was 0.55 per 1,000 of the population as against 0.53 in the previous year. The rate for the Combined Urban Districts was 0.64 and for the Combined Rural Districts 0.46.

**Public Health (Prevention of Tuberculosis) Regulations, 1925.**—These Regulations, which ordinarily apply to the Councils of Urban and Rural Districts, provide means to prevent persons suffering from pulmonary tuberculosis from being employed in occupations in connection with dairies, which would involve the milking of cows, the treatment of milk, or the handling of

vessels used for containing milk. The County Council applied for, and obtained an Order from the Ministry of Health in June, 1926, constituting the Council an Authority (concurrently with the Urban and Rural District Councils) under the Regulations. No action by the County Council was found necessary during the year under these regulations, and no information was received from any local authority in the County as to action having been taken by them.

**Public Health Act, 1925. Section 62.**—No action was taken by this County Council under the powers given to County Councils and local Sanitary Authorities for the compulsory removal to a hospital or institution of persons suffering from pulmonary tuberculosis of an infectious character, who are a serious risk to others, or whose lodging or accommodation is such that proper precautions to prevent the spread of infection cannot be taken, or in whose case such precautions are not being taken.

**Public Health Act, 1936. Section 172.**—For the most part this section reproduces section 62 of the Public Health Act, 1925, with the substitution of "tuberculosis of the respiratory tract" for "pulmonary tuberculosis." There is, however, a change of substance in sub-section (5). Section 62 (4) of the Act of 1925 placed the cost of the patient's removal upon the local authority or county council. This is now left to the discretion of the court or of the local authority in the absence of an order from the court.

This Act came into operation on October 1st, 1937.

**Dispensary Work.** The situation, days and hours of opening of the three County Tuberculosis Dispensaries are as follows :—

- |                     |   |
|---------------------|---|
| (1) Northampton.    | 40, Guildhall Road, Northampton.<br>Saturdays, 9.30 a.m. to 12 noon.                          |
| (2) Kettering.      | Market Street, Kettering.<br>Fridays, 10 a.m. to 12.30 p.m.                                   |
| (3) Wellingborough. | 108, Midland Road, Wellingborough.<br>Wednesdays, 10 a.m. to 12.30 p.m., and 2 to 3.30 p.m.   |
| Ditto.              | Ultra Violet Light Clinic, 108, Midland Road, Wellingborough.<br>Mondays, 9.30 a.m. to 2 p.m. |
| Ditto.              | Mondays, 2 p.m. X-ray appointments.   |

During the year, 1,397 patients visited the dispensaries and made a total of 3,447 attendances, or an average of 2.46 visits per patient. This number includes 1,503 attendances made by 67 patients who came for treatment by Ultra Violet Radiation at Wellingborough Dispensary. 676 new patients, exclusive of contacts, were examined in connection with the dispensaries for the first time in 1937. Of these, 215 were diagnosed as suffering from tuberculosis before the end of the year, 12 were considered to be doubtfully tuberculous and remained under observation, and 449 were considered to be non-tuberculous.

151 contacts were examined in addition to the 676 new patients. Of these, 2 were regarded as suffering from tuberculosis, 1 was considered to be doubtfully tuberculous, and 148 were considered to be non-tuberculous.

The number of visits made by the Tuberculosis Officer to patients in their own homes was 653 (inclusive of 159 personal consultations with medical practitioners). The total number of consultations, personal and otherwise, between Tuberculosis Officer and medical practitioner during the year was 1,003. This figure illustrates the co-operation which exists between general practitioners and the Tuberculosis Officer.

To emphasize this fact still more, it is very interesting to note that of the 217 new patients who were diagnosed as suffering from tuberculosis, 79 per cent. were notified after they had been examined by the Tuberculosis Officer, and only 21 per cent. previous to examination by the Tuberculosis Officer. All these patients, with the exception of 2 who were examined as contacts, were seen by the Tuberculosis Officer at the request of their own medical attendant.

During the year, the total number of visits paid by the Tuberculosis Nurse and Health Visitors to the homes of tuberculous patients was 2,872.



Comments on Statistical Tables.

Table A. in the Statistical Section shows in detail the work of the Dispensaries.

Of the 827 persons, including contacts, who were examined for the first time in 1937, 160 were found to be suffering from pulmonary tuberculosis, and 57 from non-pulmonary tuberculosis. The former were placed in the following categories :—

Sputum negative for Tubercle Bacilli .....	63 or 39.38 per cent.
„ positive „ „ „ Group 1 .....	8 or 5.00 „
„ „ „ „ „ „ 2 .....	55 or 34.37 „
„ „ „ „ „ „ 3 .....	34 or 21.25 „

The 57 non-pulmonary cases were classified as follows :—

Bones and joints .....	21 or 36.84 per cent.
Abdominal .....	9 or 15.79 „
Other Organs .....	6 or 10.53 „
Peripheral Glands.....	21 or 36.84 „

In 1937, 160 cases of pulmonary tuberculosis were diagnosed as compared with 152 cases in 1936. 57 cases of non-pulmonary tuberculosis were diagnosed in 1937 as compared with 21 such cases in 1936.

Tables B (1) and (2) in the Statistical Section show in summary form the condition of all patients whose case records were in the possession of the dispensaries at the end of 1937, arranged according to the years in which the patients first came under Public Medical Treatment for tuberculosis.

During the year, 33 pulmonary and 13 non-pulmonary cases were transferred from the arrested to the cured class and written off the Register as “ Recovered.”

Tables C (1), (2), (3) and (4) in the Statistical Section show the number of beds available in institutions and the extent of residential treatment provided during the year 1937.

During the year, 209 Northamptonshire County Council patients were under treatment at Rushden House Sanatorium.

No. of patients in Rushden House Sanatorium on 1st January, 1937...	76
„ „ admitted during the year .....	133
„ „ discharged during the year .....	106
„ „ who died in the Sanatorium .....	23
„ „ in the Sanatorium on 31st December, 1937 .....	80

One patient was admitted to Cambridge Tuberculosis Colony, Papworth, during the year, and remained under treatment at the end of the year.

One boy was discharged from Burrow Hill Sanatorium Colony, Frimley, Surrey, during the year.

One man, maintained by the Ministry of Pensions, was admitted to British Legion Village, Preston Hall, making two County patients in this colony under treatment at the end of the year.

Table D. in the Statistical Section shows the immediate results of treatment of patients discharged from institutions during the year 1937.

**Non-Pulmonary Tuberculosis.** The total number of non-pulmonary patients who received institutional treatment during 1937 was 60. The Institutions where treatment was afforded were as follows :—

Manfield Orthopædic Hospital, Northampton.....	34 patients.
Wingfield Orthopædic Hospital, Oxford .....	1 „
Creaton Sanatorium, Northampton .....	1 „
Rushden House Sanatorium (Gland and Abdomi- nal cases) .....	23 „
Royal Sea-Bathing Hospital, Margate .....	1 „



No. of patients in institutions on January 1st, 1937 .....	27
„ „ admitted during the year .....	33
„ „ discharged during the year .....	26
„ „ who died in institutions .....	1
„ „ in institutions on December 31st, 1937 .....	33

(The above figures include the gland and abdominal cases at Rushden House Sanatorium.)

**Creton Sanatorium.** Creton Sanatorium is administered by a local Committee of the National Association for the Prevention of Tuberculosis. The Sanatorium treats patients with both pulmonary and non-pulmonary disease, and a surgical unit has been established there for such purposes as major thoracic surgery. During the year the Public Health Committee has maintained patients in this Sanatorium.

The waiting list of male patients for admission to Rushden House Sanatorium became congested in May and June, and, to relieve this congestion four male patients with pulmonary tuberculosis were admitted to Creton Sanatorium for routine treatment. Two male and two female patients with combined pulmonary and non-pulmonary tuberculosis (the classification in such cases being regarded as “pulmonary”) were also under treatment at Creton Sanatorium during the year, and one man with non-pulmonary disease. The surgical unit was used for the treatment of two female patients with chronic pulmonary tuberculosis, both of whom had had routine Sanatorium treatment elsewhere on previous occasions. One of these patients had a successful thoracoplasty and the other an extra pleural artificial pneumothorax. Finally, a third female patient was admitted with a view to investigation as to the possibility of a thoracoplasty and was discharged as unsuitable.

The number of patients suitable for treatment by major thoracic surgery is restricted and consequently the organisation of such a surgical unit in one sanatorium to serve the needs of several local authorities and to receive patients from a comparatively wide area is a proper and effective arrangement.

**X-ray Work.** During the year, 965 examinations were made by X-ray screen and film at the Wellingborough Dispensary. These X-ray examinations were a useful contribution towards the determination of the diagnosis, and towards the control of treatment and progress in definite tuberculosis cases. X-ray examinations are useful in helping to pick out the many cases of pulmonary disease which simulate tuberculosis and in this way act as a restraint against over-diagnosis.

The X-ray equipment at this Dispensary was changed during the year. The 30 mA set, which was still giving good service after 8 years, was removed for use at the Rushden House Sanatorium. In its place a Watson Super Roentgen Power Unit, with a “Versatil” couch, was installed. This unit is shockproof and of the most modern design. Screening and filming can be accomplished without any risk of overloading the tube, and the “Versatil” couch acts as either couch or screening stand. The unit takes photographs of the average adult chest at 4½ feet in 0.1 second, or at 6 feet in 0.15 second.

**Pathological Specimens.** During the year, 518 specimens of sputum were examined for tubercle bacilli by the Tuberculosis Officer; of these, 106 were positive. The Tuberculosis Officer is often curious as to the clinical condition in cases with purulent negative sputa to which he has not been introduced. On the whole, it is considered that practitioners rely too much upon a negative sputum report in discarding a diagnosis of pulmonary tuberculosis.

**Shelters.** The number of open-air shelters occupied by tuberculous patients during the year was 21. All these are the property of the County Council. The shelters are made in sections and bolted together, but their periodic taking down, removal, and reassembling for the use of patients makes renewals necessary from time to time. Removals and re-erections were carried out on six occasions during the year. In May, 1937, one shelter had become dilapidated and was beyond all possibility of repair; in these circumstances instructions were given for the Shelter to be broken up and burned. No new shelters were purchased in 1937.

### General.

The year under review was the busiest in the history of our County Dispensaries. All the figures in connection with the Dispensary work of diagnosis and the arrangement of treatment show a substantial increase beyond those of the previous year with the exception of the statistics relating to artificial pneumothorax treatment. Briefly these figures may be mentioned :—

The number of new cases seen was increased by 173 ; the number of Dispensary attendances by 524 ; the number of consultations with medical practitioners by 359 ; the number of X-ray examinations by 205 ; the number of sputum examinations by 62 ; the number of domiciliary visits by Health Visitors by 307 and the number of domiciliary visits by Tuberculosis Officer by 5. On the other hand the number of artificial pneumothorax inductions and refills was 251 compared with 352 in 1936.

### Treatment.

In addition to routine Sanatorium and Domiciliary treatment, additional measures have been adopted.

The following methods of treatment have been applied at the patients' homes, at Dispensaries and at the Sanatorium :—

1. TUBERCULIN. A patient with renal tuberculosis received tuberculin from the Dispensary with good results throughout the year.
2. GOLD SALTS. Gold salts in the form of Solganal B. Oleosum have been used for patients with pulmonary tuberculosis. 16 injections were given by the Tuberculosis Officer at Dispensaries during the year.
3. COLLAPSE THERAPY.
  - a. One female patient had a thoracoplasty at Creton Sanatorium during the year.
  - b. One female patient had an extra pleural artificial pneumothorax at Creton Sanatorium.
  - c. Artificial Pneumothorax. 2 pneumothorax inductions and 249 refills were given during the year by the Tuberculosis Officer. These operations were carried out as follows :—

At Patients' Homes .....	30
At Sanatorium .....	21
At Dispensaries.....	200
	<hr/>
	251

Both inductions were carried out in patients' homes. In one instance the induction was made prior to admission to sanatorium and in the other the patient refused institutional treatment.

Eighteen patients were treated, and 10 were fit for work at the end of the year.

4. ULTRA VIOLET RADIATION by means of an Alpine Sun Lamp and a Kromayer Lamp for local treatment was given for glands in the neck and for lupus. A report on this treatment is given later.

### Acute pulmonary disease among young adult females.

The Tuberculosis Officer has for some years been impressed by the number of cases of pulmonary disease among young adult females which are of an acute type and do not show a favourable response to treatment. The number of deaths from pulmonary tuberculosis in females of 15-24 years during the last 5 years is 67, the corresponding figure for males being 52. The 1931 census gives the population of the County in the age group 15-24 years as males 17,520 and females 17,447, from which the mortality rates for the last 5 years have been calculated.



### Pulmonary Tuberculosis, 1933-37.

Death rate among females in age group 15-24 years—0.76 per 1,000.

" " males " " 15-24 years—0.59 per 1,000.

From these figures it will be seen that there has during the last 5 years been a decidedly greater mortality among young adult females than among males of the same age group. The problem has been widely discussed at Tuberculosis Congresses during recent sessions, but no particular factor or group of factors has so far been proved to be responsible for the tuberculosis virulence which overshadows with such tragic potentialities the fate of young women and particularly those in tuberculosis households.

To tackle this problem we must cling to our present knowledge and resources—contact examination, education in the precepts of healthy living, isolation of the infective patient and the disposal of sputum, in addition to such important general measures of a public health character as improvement of housing and working conditions, abatement of overcrowding and means for securing a higher standard of nutrition in the community.

Dr. G. B. Lord, the Tuberculosis Officer, contributes the following clinical note.

## TREATMENT OF TUBERCULOSIS BY ARTIFICIAL LIGHT.

During the year ended 31st December, 1937, 67 patients attended the Wellingborough Dispensary for treatment by Ultra Violet Radiation. The total number of attendances made by these patients was 1,503.

The conditions for which treatment was given are classified as follows :—

Lupus .....	7
Cervical adenitis .....	29
Tuberculous osteitis .....	5
Delicate .....	23
Psoriasis and conjunctivitis .....	1
Sinus in groin following orchidectomy .....	1
Fistula in ano .....	1
	<hr/>
	67

LUPUS.

No new patients attended for treatment. Seven old patients continued treatment during the year and none of them was discharged. Treatment was given by general and local Ultra light, with gold when required.

None of these patients is at the moment in a serious condition with lupus. Most of them are practically quiescent, and there is no mixed infection in any of them.

### CERVICAL ADENITIS.

Ten old patients continued treatment, and of these, four were discharged during the year as arrested cases. Resection of the glands surgically had assisted the result in two of these cases.

Nineteen new patients with glands began treatment during the year, and of these, eight were discharged before the end of the year as not in need of further treatment. One of the new cases died of meningitis.

These gland cases are a mixed collection of conditions. Some of them are fine shotty glands in the neck. Others are obviously septic conditions due to tonsils or teeth which clear up rapidly when the primary focus is dealt with. Others are more obviously tuberculous glands, and these are notified ; a high percentage of these patients have a quick recovery with local and general



light treatment, without any interference. A few, however, of the cervical infiltrations which are somewhat calcified are more resistant to treatment.

#### TUBERCULOUS OSTEITIS.

Two old patients continued treatment during the year. One made excellent progress, but in the other case—a patient with an abscess of the rib and a negative Wassermann—no progress was noted.

Three new patients started treatment. A case of tuberculosis of the rib; another case, abscess of the sternum; and another, originally with active pulmonary tuberculosis, who developed a rib abscess, healed during the year. One of these patients was discharged before the end of the year.

#### DELICATE.

Fifteen old cases continued treatment, and eight new cases commenced treatment during the year. These children were regarded as delicate on account of being under-developed or presenting some evidence of rickets, or symptoms of chronic cough and abdominal discomfort. In most of the cases some family history of tuberculosis was apparent.

They all showed some improvement in weight gain, and more satisfactory vitality. Four old patients and one of the new ones were discharged from treatment during the year.

#### PSORIASIS AND CONJUNCTIVITIS.

The girl who had had psoriasis in the previous year continued treatment for three more months and then was discharged as cured.

#### SINUS IN GROIN FOLLOWING ORCHIDECTOMY.

One patient with a sinus in his groin following orchidectomy had treatment, and the condition healed up during the year.

#### FISTULA IN ANO.

A boy with fistula in ano was kept under observation during the year and had local treatment which healed up the fistula satisfactorily.

#### EQUIPMENT.

At the end of January, 1937, a new Super Kromayer Lamp was installed from Messrs. Hanovia, Ltd. This is a lamp of excellent design with a self-contained water cooling system and pump. Results of treatment have improved considerably since its installation.

The results of treatment seem to suggest that the most valuable results are gained with tuberculous glands and sinuses. Light treatment appears to be the most efficient and quickest measure of dealing with these glands.

It is a valuable character of the therapy that patients who are being treated can continue at work. The patients attend at out-patient centres, and in-patient treatment is not necessary.

For lupus cases local and general Ultra Violet Radiation, together with gold, can prove of marked value.

## AFTER CARE.

During the year the After Care services in the County continued their work of assisting tuberculous patients and families by means of practical help and advice and by grants of milk, butter, eggs and Christmas parcels. As detailed in the report for 1936, After Care assistance and relief is supplied from three sources, the Voluntary Care Committees, the Public Assistance Committee and the Public Health Committee, and the Tuberculosis Officer co-ordinates these services to avoid overlapping.

### **Voluntary Care Committees.**

Since last year there has been no change in the number of Voluntary Care Committees; committees are in existence in the following districts—Higham Ferrers Borough, Desborough Urban District, Irthlingborough Urban District, Kettering Urban District, Raunds Urban District, Rothwell Urban District, Rushden Urban District, Wellingborough Urban District. Routine work has proceeded successfully and many valuable and permanent results have been achieved by the Committees. The Secretaries have been constantly in touch with this Department in regard to the requirements and problems of particular patients. Satisfactory results have especially been achieved in Rushden and Kettering, attributable to bold drives for the establishment of finances. In particular, the co-operation of Mr. A. H. J. Crick and his Committee in Kettering, of Miss A. M. Sharwood and Miss A. M. Claridge and their Committee in Rushden, and of Mr. F. E. Gadd and his Committee in Wellingborough, has been appreciated.

### **Care Work by Public Assistance Committee.**

This After-Care work is entirely the responsibility of the Public Assistance Committee. The Tuberculosis Officer has, from time to time, been able to have the grant increased by describing to the Public Assistance Officer the medical nature of the cases and the condition and health of contacts.

### **Public Health Committee Care Work.**

As described in detail in the report for 1936, the work and responsibility of the Standing Sub-Committee of the Public Health Committee in dealing with relief to tuberculous patients and families has very considerably increased. £525 was granted for the purpose of relief and of all After-Care problems amongst patients for the financial year ended March 31st, 1938, and of this amount, the sum of £506 11s. 9d. was spent. Several families received substantial grants and were in this way prevented from the necessity of applying for Public Assistance. Such action adheres to the principle that relief must be given to tuberculosis households before destitution sets in and be continued long after the medical crisis has passed, if rehabilitation is to be effective and permanent.

Extra Nourishment in the form of milk, butter and eggs was granted to 81 patients as against 72 in the previous year.

A wife, unable to do her housework, continued to receive 6/- per week throughout the year for a domestic help until her death on August 23rd, 1937.

A widow, discharged from Sanatorium, with seven children, continued to receive 20/- per week in the form of foodstuffs (general diet) throughout the year.

A man, discharged from Sanatorium, and not fit for work, and yet living in a highly rented house, continued to receive for himself and wife and child 27/6d. per week in the form of foodstuffs (general diet) throughout the year.

The family of a man in Sanatorium, consisting of wife and three children, received as from May 23rd, 1937, sums varying from 7/- to 24/- per week in the form of foodstuffs (general diet). On the man's discharge from Sanatorium on November 22nd, 1937, this grant was stabilised at 10/- per week until the end of the year,



The family of a man in Sanatorium, consisting of wife and two children, received as from September 12th, 1937, 12/- per week in the form of foodstuffs (general diet). After the man's discharge from Sanatorium on October 15th, 1937, the grant was increased to 21/6d. per week until the end of the year.

#### RUSHDEN HOUSE SANATORIUM.

The following Report has been prepared by Dr. Crane, the Superintendent of the Sanatorium :—

“ Throughout the year, as in 1936, 84 beds were available for the treatment of patients suffering from pulmonary tuberculosis. The allocation of these beds was as follows :—Men 35, Women 35, Children 14 (boys 7, girls 7). Of these beds, 28 are specially kept for acute and advanced cases, 14 for men and 14 for women. There is also an emergency bed fitted up in a separate room in the administrative block for an acute or advanced case when required.

No beds are specially kept for observation cases, but accommodation is always made for such cases, as and when required.

During the year, five children and one man were admitted for observation. Three of the children were diagnosed as tuberculous abdominal glands, and two as tuberculous peripheral glands. The man was diagnosed as non-tuberculous and discharged.

An average of 81.7 beds was occupied throughout the year. The decrease in the average number of beds occupied is due to the falling off of the number of children admitted, which bears out the advice of the Ministry of Health not to rebuild the Children's Block. London County Council kept an average of 5.19 beds occupied throughout the year.

The majority of children admitted recently have been suffering from the non-pulmonary type of the disease.

There were 152 admissions (60 males, 75 females, 17 children) and 147 discharges (60 males, 72 females, 15 children). Once again a large percentage of the adult cases admitted were of a serious and heavy type with widespread disease. One man, with well-marked pulmonary symptoms, and who had an old standing peritonitis, suddenly developed intestinal obstruction due to adhesions. He was sent to hospital for immediate operation and on his return to the Sanatorium, made a good recovery. Another case admitted with tuberculous epididymitis was successfully operated on in hospital and returned to the Sanatorium. Five children were successfully operated on for the removal of tuberculous cervical glands. One female adult case of pulmonary tuberculosis, complicated by diabetes, was treated with Insulin during her stay at the Sanatorium.

Routine periodical sedimentation tests have been carried out on all patients during the year, and in addition some blood counts, including a modified Von Bonsdorff Count. Several cases were treated with injections of gold, intramuscular and intravenous, and several other cases received intramuscular injections of Cadmium Sulphide.

Artificial Pneumothorax was induced in one case of very severe haemoptysis, and the collapse was maintained with a good result. Thirty-nine refills were given during the year, without the aid of X-rays, as no X-ray apparatus was available at the Sanatorium.

One sixth of the adult patients admitted were engaged in the boot and shoe industry, and a large number of married women, admitted as housewives, had previously been engaged in this industry.

The Senior County Dental Surgeon, Mr. Campion, attended at the Sanatorium at monthly intervals during the year. He carried out his work in a highly satisfactory manner and with great benefit to the patients. I append herewith his report :—

*‘ Rushden House Sanatorium—Dental treatment for the year 1937.*



During the year visits were made to the Sanatorium at intervals of about a month—  
The following work was done :—

Routine inspection of patients .....	73
Patients actually treated .....	43
Extractions .....	56
Fillings .....	25
Other operations .....	5

The difference between routine inspections and patients actually treated is made up by—

1. Refusal of patients.
2. Patients too ill for treatment.
3. Patients found to require no treatment.

Only a small amount of work is done for each patient at one visit, as in many cases the condition of the patient does not warrant of a long session in the chair, or of extensive extraction operations. All extractions have been carried out by means of local or regional injection.

It is unfortunate that *all* patients found to require treatment and fit enough to have it, do not take advantage of the service offered. Throughout the year the visits to the Sanatorium have been satisfactory and uneventful, thanks very largely to the helpful co-operation of Dr. Crane.'

As heretofore, the roads and paths have been kept in good repair by the County Surveyor.

**GIFTS.** Once again my Chairman has been the means of obtaining a most useful and handsome gift for the Sanatorium, in the form of a Talkie Machine. This most generous gift was made by the Rushden Rotary Club and was presented to Lord Henley on behalf of the Sub-Committee. It has been very much appreciated by the patients.

Gifts of various kinds—books, magazines, toys, eggs, fruit, clothing, etc., have again been generously given. The local branch of Toc H. have erected a pillar box in the Ritz Cinema for the purpose of collecting books, magazines, etc., for the patients.

The Committee, patients and Medical Superintendent, extend their grateful thanks to all those kind donors.

In addition to pictures on the new Talkie Machine, many concerts, plays and whist drives have been given throughout the year.

**SCHOOL.** Women patients, free from infection, have given useful help in the instruction of the children.

**FARM AND GARDEN.** The farm and garden continue to be efficiently run by the gardener. Owing to a bad fruit year, we were unable to exhibit at the County Show.

**GENERAL.** A variety of remedial exercises and occupations are available for patients considered to be in a fit state to benefit from them. All cases for this purpose are carefully selected and graded by the medical superintendent and all exercise and work is supervised by him or his assistant.

The chief exercises and occupations are walking, gardening (including fruit growing, picking and packing), poultry rearing, pig-keeping, joinery, carpentry and painting.

Demonstrations in grafting of fruit trees are given each year by the County Horticulturist, and demonstrations in fruit spraying by the gardener. There are facilities for the repair of boots and shoes, and indoor leisure such as leather work, beadwork, toys, garments, pictures, milk pail covers, etc. A ready market is still available for articles made. The same lady teacher and male ex-patient continue to give useful help with this work.

For outdoor leisure, bowls, clock golf, and croquet are available, and such indoor games as billiards, darts and table tennis are available. Wireless sets are installed in all the wards.

The patients give useful help in the upkeep of the grounds, lawns and buildings.

The Medical Superintendent endeavours to instil into all patients the great importance of reporting to the Tuberculosis Officer, after discharge from the Sanatorium. To this end, he sees all patients on discharge and in addition each discharged patient receives printed instructions to this effect (in the case of children, the parent or guardian receives these instructions). They are also advised to get in touch immediately with their own doctor.

All patients are also encouraged to keep in touch with the Medical Superintendent, and it is very encouraging how many of them do so. By this means he is often able to give them help or advice regarding some difficulty they may have encountered since their discharge.

RE-BUILDING SCHEME. The new bungalow block for twenty female patients was completed and the patients were installed at the end of the year. This block is a very great improvement on the wooden huts from the point of view of both patients and staff.

Towards the middle of next year it is hoped to have the new treatment block completed, and the erection of a bungalow block for fourteen patients commenced.

The land (two and three quarter acres) mentioned in my last report in connection with the development scheme, has been purchased and railed off, and a quick fence has been planted around. This land will prove to be a most useful acquisition in the new scheme.

In addition to the above, the following works still remain to be carried out :—

1. Adoption of first floor of administrative block for staff.
2. Kitchen improvements.
3. Erection of bungalow block for 20 patients."

## 5. VENEREAL DISEASES.

TREATMENT. The arrangements made with the Northampton General Hospital for the diagnosis and treatment of patients suffering from Venereal Diseases were continued during the year, the parties to the arrangements being as hitherto, *viz.*, the County Councils of Northampton and Buckingham and the Northampton County Borough Council.

The days and hours of openings of the Out-Patient Clinic at the Northampton General Hospital are :—

Sundays (fortnightly) at 11.30 a.m., for Males.

Mondays at 7.30 p.m. for Females.

Wednesdays at 2 p.m., for Males, and 5 p.m. for Females.

Fridays at 8 p.m., for Males.

During the year 1937, 197 new County patients attended the out-patient clinic for treatment as compared with 154 in the year 1936. The total attendances of all County patients amounted to 3,268 as against 2,975, and the number of patients discharged after completing treatment was 107 as against 81. The number who ceased to attend without completing treatment, or before the final test as to cure, was 47 as against 40.

The number of persons treated with salvarsan substitutes was 242 as against 217 for the year 1936.

The number of County in-patients treated at the Northampton General Hospital was ten (males 4, females 6), as against 9 in the previous year.

It was found necessary to repay the travelling expenses of twelve persons from the County, who attended the Clinics.

The following Table supplies information as to new County cases and attendances, etc., during the three years 1935-1937 :

	1935		1936		1937	
	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES
1. Number dealt with at or in connection with the Out-patient Clinic for the first time .....	78	43	105	49	125	72
2. Total attendances of all persons at the Out-patient Clinic .....	1546	768	2075	900	2150	1118
3. Number discharged after completion of treatment .....	44	29	44	37	66	41
4. Number who ceased to attend without completing treatment .....	24	4	30	10	43	4
5. Number of persons treated with salvarsan substitutes .....	171	32	169	48	185	57

Every effort is made by the staff of the Venereal Diseases Clinic to secure the re-attendance of patients who have ceased to attend before completing treatment.

In two special cases arrangements were made for visits to be paid by Health Visitors to secure the re-attendance of defaulters.

By the end of the year, 1,173 pathological examinations had been made at the Laboratory of the Hospital, as against 970 in the year 1936.

NATURE OF TEST.	NUMBER OF TESTS IN RESPECT OF PATIENTS UNDER CARE OF :		
	TREATMENT CENTRES	HOSPITAL AND OTHER INSTITUTIONS	PRIVATE PRACTITIONERS
MICROSCOPICAL—			
For detection of spirochetes	10	1	—
For detection of gonococci	450	53	74
SERUM TESTS—			
For Wassermann reaction	175	192	130
For gonococcal infection	1	2	3
CEREBRO-SPINAL FLUID TESTS—			
Wassermann reaction	1	9	3
Cell count	1	2	1
Globulin	—	2	1
Colloidal	1	3	1
Others : Protein	1	3	2
Sugar	1	2	1
Chlorides	1	—	—
CULTURES—			
For Gonococci	46	—	—
	688	269	216



There were 11 Medical Practitioners in the County, inclusive of the two Medical Officers of the Treatment Centre, scheduled as being qualified to receive free supplies of salvarsan substitutes during the year, and supplies were sent, on request, to three of these in respect of four cases.

In addition to the in-patients at the Northampton General Hospital previously mentioned, two unmarried girls received treatment in Cleveland House, Wolverhampton, four in St. Mary's Home, Leicester, and two in Edge Lane Hospital, Liverpool, as County Council patients. They were admitted for treatment of pregnancy and venereal disease.

## SECTION G.

### Health Propaganda and Educational Work.

#### SOCIAL HYGIENE PROPAGANDA.

Throughout the year various types of meetings have been addressed by the County medical staff as well as by Miss Cole, the Honorary Secretary of the County Branch of the British Social Hygiene Council.

These meetings have included talks at Men's Firesides, Women's Institutes, Infant Welfare Centres and Mothers' Unions.

The social hygiene campaign was carried out mainly at Rushden, and Earls Barton, by British Social Hygiene Council lecturers, with Miss Cole. There were six meetings of parents and one mixed public meeting, besides single meetings of Sunday School Teachers, Social Workers, and Representatives of Local Authorities. In addition, courses of illustrated film talks were given separately to boys and girls over 16 years of age, and to girls 13-16 years invited through parents and club leaders.

The total attendances at all meetings amounted to 3,512.

Miss Cole has furnished me with the following report : " the proportion of the population un-reached is still very high. More organizations such as Firesides (men), Women's Institutes, are asking for addresses on social hygiene ; the Mothers' Union is urging all over the country that three talks be given (not one) on the moral training of children, and where I am invited, I use my own syllabus and ask that the neighbouring villages may be invited too. More help to young people of 13-16 is needed, even if the schools now began to give sex teaching at 13, the boys and girls now over 14 will not have had that advantage, and are too young to be dealt with at large public meetings."

Thanks are due to Miss Cole for the immense work undertaken in connection with the campaign. The whole of the organization, including difficult preliminary arrangements, were tactfully and efficiently carried out by her, under the general direction of the County Medical Officer of Health.

#### GENERAL HEALTH EDUCATION.

As stated in previous reports, Education is an important function of the Health Services. During the year under review a great deal of attention has been paid to health propaganda. With the ready co-operation of Women's Institutes, talks and lectures have been given in many districts by members of the Medical Staff. These talks were well attended, and in many Institutes arrangements have been made for a continuation series, covering several years.

Useful educational work is also carried out by Medical Officers and Health Visitors at Schools and Welfare Centres.

The following is a list of the external lectures given during the year by the medical and technical staff.

## TALKS AND LECTURES.

1937.

January	Castle Ashby Women's Institute.	"Physical Fitness."
	Earls Barton.	"Social Hygiene."
February	Grendon Men's Fireside.	
	Daventry Extension Society.	"New Homes for Old."
	Thrapston Men's Fireside.	"Cobwebs and Infectious Disease."
	Towcester Lecture Society.	"Design for a small Community."
March	Rushden (Baptist) Men's Fireside.	"Sex."
	College Street (Northampton) United Fellowship.	"New Houses for Old."
	Achurch Women's Institute.	"Nursing of Children's Ailments."
	Greens Norton Women's Institute.	"Health topics, other than Infectious disease."
April	Earls Barton Women's Institute.	"General Health."
	Yelvertoft Women's Institute.	
	County Council Labour Group.	"Public Health Matters."
	Ashton (Roade) Women's Institute.	"Health."
May	Moulton Women's Institute.	"General Health of the Family."
June	Hardingstone Women's Institute.	"Taking Medicine for Pleasure."
July	Yardley Gobion Women's Institute.	"Care of the Adolescent."
	Kilsby Women's Institute.	"Care of the Aged."
September	Weedon Women's Institute.	"General Health."
October	Great Bowden Co-operative Guild.	"Production, Distribution and Pasteurisation of Milk."
	Arthingworth Women's Institute.	"General Health, adults and children."
November	Sibbertoft Women's Institute.	"General Health, adults and children."
December	Welford Infant Welfare Centre.	"Food and Food Values."

## SOCIAL HYGIENE.

This may be described under two headings : (a) The Educational Work of the Northamptonshire Branch of the British Social Hygiene Council, and (b) the work on behalf of unmarried mothers and their children. This work is carried out on a voluntary basis through the agency of the Peterborough Diocesan Moral Welfare Association. The Organizing Secretary of the Association, who acts in close co-operation with the Health Department of the County Council, is Miss J. M. Cole, Church House, Northampton (Tel. No. 1326).



## STATISTICAL SECTION.

**MATERNITY AND NURSING HOMES.** The following table gives particulars of the action taken by the Local Supervising Authority under the Nursing Homes Registration Act, 1927, and the Public Health Act, 1936 :—

	MATERNITY HOMES.	OTHER NURSING HOMES.
Number of applications for registration received during 1937 .....	2 (a)	—
Number of Homes registered .....	2 (b)	—
Number of orders made refusing or cancelling registration .....	—	—
Number of appeals against such orders .....	—	—
Number of cases in which such orders have been :—		
(a) confirmed on appeal .....	—	—
(b) disallowed .....	—	—
Number of applications for exemptions from registration.....	—	2
Number of cases in which exemption has been—		
(a) granted .....	—	2
(b) withdrawn .....	—	—
(c) refused .....	—	—

(a) *One registered in 1938.*

(b) *One application received in 1936.*

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The registered homes in the County at the time of reporting were (unless otherwise stated) :—

1. "The Firs," Tiffield.
2. "Park Lodge," Brackley (now Brackley Park Hospital).
3. "Brookfield Maternity Home," Old Rectory, Rushden (Maternity only).
4. "Bethel Nursing Home," Kettering Road North, Northampton.
5. "The Haven," Bridge Street, King's Cliffe (Maternity only).
6. "Woodfield Nursing Home," 36, Wellingborough Road, Finedon.
7. "Burnside Nursing Home," Brackley (Opened 18-1-38).
8. "Newlyn Nursing Home," 90, Rockingham Road, Kettering (Maternity only).  
(Opened 17-5-38.)

# INFANT WELFARE CENTRES.

NAME OF CENTRE.	AVERAGE NO. OF INFANTS ATTENDING PER SESSION.	AVERAGE NO. OF CONSULTATIONS PER DOCTOR'S ATTENDANCE	ATTENDANCES BY DOCTOR.	SESSIONS.
Brackley .....	17	15	11	13
Brixworth .....	28	15	11	11
Burton Latimer .....	29	24	10	19
Byfield .....	18	18	20	20
Cold Ashby .....	21	10	10	11
Corby .....	32	27	21	21
Daventry .....	17	5	7	20
Desborough .....	34	23	20	21
Duston .....	17	18	12	20
Earls Barton .....	24	21	10	20
Finedon .....	24	23	10	20
Higham Ferrers .....	28	22	12	20
Irchester .....	16	5	19	22
Irthlingborough .....	29	28	11	14
Long Buckby .....	15	11	9	9
Moulton .....	31	17	10	10
Potterspury .....	26	25	11	11
Raunds .....	35	20	10	11
Rothwell .....	36	25	19	22
Rushden.....	52	35	21	41
Towcester .....	19	9	17	19
Wellingborough .....	32	27	32	51
Wollaston .....	25	11	13	22
Woodford (Thrapston).....	25	29	11	18
Weedon (Military) .....	10	9	11	11

## TREATMENT OF TUBERCULOSIS.

TABLE A.

Return showing the work of the Dispensaries during the year 1937.

DIAGNOSIS.	Pulmonary				Non-Pulmonary				Total				Grand Total	
	Adults		Children		Adults		Children		Adults		Children			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
A.—New Cases examined during the year (excluding contacts) :—														
(a) Definitely tuberculous ...	87	67	4	1	12	12	19	13	99	79	23	14	215	
* (b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	5	6	—	1	12	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	169	152	75	53	449	676
B.—Contacts examined during the year :—														
(a) Definitely tuberculous ...	—	1	—	—	—	—	1	—	—	1	1	—	2	
* (b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	—	1	—	—	1	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	14	41	42	51	148	151
C.—Cases written off the Dispensary Register as :—														
(a) Recovered ... ..	8	14	6	5	3	2	6	2	11	16	12	7	46	
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous) ... ..	—	—	—	—	—	—	—	—	187	197	118	107	609	655
D.—Number of Cases on Dispensary Register on December 31st :—														
(a) Definitely tuberculous ...	324	233	26	25	39	41	42	46	363	274	68	71	776	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	5	7	—	1	13	789

1. Number of cases on Dispensary Register on January 1st ...	715	7. Number of consultations with medical practitioners :—	
2. Number of cases transferred from other areas, and cases returned after discharge under Head 3 in previous years ...	13	(a) Personal † ...	159
3. Number of cases transferred to other areas, cases not desiring further assistance under the tuberculosis scheme, and cases "lost sight of" ...	30	(b) Other ...	844
4. Cases written off during the year as Dead (all causes) ...	81	8. Number of visits by Tuberculosis Officers to homes (including personal consultations) †	653
5. Number of attendances at the Dispensary (including Contacts) ...	3,447	9. Number of visits by Nurses or Health Visitors to homes for Dispensary purposes ...	2,872
6. Number of Insured Persons under Domiciliary Treatment on the 31st December ...	275	10. Number of :—	
		(a) Specimens of sputum, etc., examined ...	518
		(b) X-ray examinations made in connexion with Dispensary work ...	965
		11. Number of "Recovered" cases restored to Dispensary Register, and included in A(a) and A(b) above ...	6
		12. Number of "T.B. plus" cases on Dispensary Register on December 31st ...	349

NUMBER OF DISPENSARIES FOR THE TREATMENT OF TUBERCULOSIS (excluding centres used only for special forms of treatment).

Provided by the Council ... 3

\* i.e., remaining undiagnosed on 31st December.







TABLE B. (2)

**RESIDENTIAL INSTITUTIONS.**

TABLE C. (1.)

**Number of beds available for the treatment of Tuberculosis on the 31st December in Institutions belonging to the Council.**

NAME OF INSTITUTION.	FOR PULMONARY CASES.		FOR NON-PULMONARY CASES.		TOTAL.
	Adults.	Children under 15.	Adults.	Children under 15.	
RUSHDEN HOUSE SANATORIUM .....	70	14	—	—	84
<b>Poor Law Institutions :—</b>					
No beds specially set apart in these Institutions for the treatment of tuberculosis, but on account of the pressure on Sanatorium accommodation, the following cases were treated during the year 1937 :—					
KETTERING.....	8	—	—	—	8

TABLE C. (2.)

**Return showing the extent of Residential Treatment and Observation during the year in Institutions (other than Poor Law Institutions) approved for the treatment of Tuberculosis.**

		In Institutions on Jan. 1st. (1)	Admitted during the year. (2)	Discharged during the year. (3)	Died in the Institutions. (4)	In Institutions on Dec. 31st. (5)
Number of doubtfully tuberculous cases admitted for observation	Adult males	—	1	1	—	—
	Adult females	—	—	—	—	—
	Children	1	5	3	—	3
	Total	1	6	4	—	3
Number of patients suffering from pulmonary tuberculosis	Adult males	39	66	54	8	43
	Adult females	28	58	41	14	31
	Children	4	5	5	—	4
	Total	71	129	100	22	78
Number of patients suffering from non-pulmonary tuberculosis.	Adult males	1	6	1	—	6
	Adult females	6	5	6	—	5
	Children	19	17	16	1	19
	Total	26	28	23	1	30
GRAND TOTAL. ... ..		98	163	127	23	111



TABLE C. (3.)

Return showing the extent of Residential Treatment provided during the year in Poor Law Institutions for persons chargeable to the Council.

		In Institu- tions on Jan. 1st.	Admitted during the year.	Discharged during the year.	Died in the Institu- tions.	In Institu- tions on Dec. 31st.
Number of patients suffering from pulmonary tuberculosis.	Adult males	3	4	2	2	3
	Adult females	2	—	—	1	1
	Children	—	—	—	—	—
	Total	5	4	2	3	4
Number of patients suffering from non-pulmonary tuberculosis	Adult males	—	—	—	—	—
	Adult females	—	—	—	—	—
	Children	—	2	—	2	—
	Total	—	2	—	2	—
GRAND TOTAL ... ..		5	6	2	5	4

TABLE C. (4.)

Return showing the results of observation of doubtfully tuberculous cases discharged during the year from Institutions approved for the treatment of Tuberculosis.

Diagnosis on discharge from observation.	FOR PULMONARY TUBERCULOSIS.						FOR NON-PULMONARY TUBERCULOSIS.						TOTALS.		
	Stay under 4 weeks.			Stay over 4 weeks.			Stay under 4 weeks.			Stay over 4 weeks.					
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Tuberculous      ...      ...      ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Non-Tuberculous ...      ...      ...	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Doubtful      ...      ...      ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTALS      ...      ...      ...	—	—	—	1	—	—	—	—	—	—	—	—	—	—	3

INSTITUTIONAL TREATMENT. TABLE D.

Return showing the immediate results of treatment of definitely tuberculous patients discharged during the year from Institutions (other than Poor Law Institutions) approved for the treatment of Tuberculosis.

Classification on admission to the Institution	Condition at time of discharge	Duration of Residential Treatment in the Institution															Grand Totals		
		*Under 3 months			3—6 months			6—12 months			More than 12 months			Totals.					
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.			
Pulmonary Tuberculosis	Class T.B. minus	Quiescent ... ..		1			1		4	4	2	1		5	6	2	13		
		Not quiescent ... ..	1	2		5	1		4	6		1		2	11	9	2	22	
		Died in Institution ...	1	1			1							1	2		3		
	Class T.B.,plus Group 1	Quiescent ... ..					1		1					1	1		2		
		Not quiescent ... ..				1								1			1		
		Died in Institution ...																	
	Class T.B.,plus Group 2	Quiescent ... ..				2			1		1			3		1	4		
		Not quiescent ... ..	4	3		10	3		8	12		3		25	18		43		
		Died in Institution ...							2	2		1		3	2		5		
	Class T.B.,plus Group 3	Quiescent ... ..								1					1		1		
		Not quiescent ... ..	1			1	4		3	1		2	1	7	6		13		
		Died in Institution ...	1	1		2	1			2				3	4		7		
	TOTALS (pulmonary)		8	8		21	12		23	28	3	8	1	2	60	49	5	114	
	Non-Pulmonary Tuberculosis	Bones and Joints	Quiescent ... ..					1	1		1	1		4	2		6	4	10
			Not quiescent ... ..				1					1			1		1	2	
Died in Institution ...																			
Abdominal		Quiescent ... ..									1			2			3	3	
		Not quiescent ... ..			1												1	1	
		Died in Institution ...												1			1	1	
Other Organs		Quiescent ... ..																	
		Not quiescent ... ..																	
		Died in Institution ...																	
Peripheral Glands		Quiescent ... ..			1								1			2	2		
		Not quiescent ... ..			2		1			1						4	4		
		Died in Institution ...																	
TOTALS (non-pulmonary)				4	1	1	2		1	4		4	6	1	6	16	23		

\* but exceeding 28 days.

CAUSES OF DEATH IN ADMINISTRATIVE AREAS.—URBAN DISTRICTS.

TABLE I. (a)

CAUSES OF DEATH.	Kettering U.D.		Brackley M.B.		Daventry M.B.		Desboro' U.D.		Higham Ferrers M.B.		Irthling- borough U.D.		Oundle U.D.		Raunds U.D.		Rothwell U.D.		Rushden U.D.		Welling- borough U.D.		Burton Latimer U.D.		Aggregate of U.D.'s		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
All Causes ... ..	191	145	11	18	39	24	24	19	14	20	30	24	18	23	32	35	26	31	74	81	142	141*	23	13	624	574	
1 Typhoid and paratyphoid fevers	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2 Measles ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3 Scarlet fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4 Whooping cough ... ..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
5 Diphtheria ... ..	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6 Influenza ... ..	3	5	...	...	3	...	...	1	1	1	...	...	1	3	3	3	...	3	3	...	...	...	...	...	...	...	
7 Encephalitis lethargica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8 Cerebro-spinal fever	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
9 Tuberculosis of respiratory system	10	5	...	...	3	1	...	1	1	...	5	2	...	...	4	...	1	4	2	2	6	...	...	...	...	...	
10 Other tuberculous diseases	2	3	...	...	2	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	
11 Syphilis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12 General paralysis of the insane, tabes dorsalis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
13 Cancer, malignant disease	27	18	1	4	8	3	...	...	1	5	6	5	2	2	2	10	6	5	9	12	19	...	...	...	...	...	
14 Diabetes ... ..	3	2	...	...	1	2	...	2	...	...	...	1	1	...	...	...	...	1	2	3	1	...	...	...	...	...	
15 Cerebral hæmorrhage, &c.	19	14	2	3	...	1	...	...	1	1	1	2	1	...	...	2	...	2	3	7	15	...	...	...	...	...	
16 Heart disease ... ..	39	40	3	2	9	8	2	4	5	6	7	6	5	5	8	7	9	5	22	30	40	43	9	1	160	155	
17 Aneurysm ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	
18 Other circulatory diseases	13	10	...	...	2	1	3	4	1	3	1	...	1	1	1	1	1	4	4	1	...	...	...	...	...	...	
19 Bronchitis ... ..	10	2	1	...	1	...	...	3	...	...	1	1	1	2	...	...	1	...	3	2	10	...	...	...	...	...	
20 Pneumonia (all forms)	7	5	1	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	2	...	...	...	...	...	...	
21 Other respiratory diseases	3	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	
22 Peptic ulcer ... ..	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	
23 Diarrhœa, &c. (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
24 Appendicitis ... ..	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25 Cirrhosis of liver ... ..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
26 Other diseases of liver, etc.	2	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	2	1	...	...	...	...	...	
27 Other digestive diseases	4	5	...	...	...	...	...	3	...	1	...	...	...	...	...	1	...	...	...	1	5	...	...	...	...	...	
28 Acute and chronic nephritis	4	3	...	...	2	...	1	2	...	...	4	...	...	1	1	...	1	...	...	1	3	...	...	...	...	...	
29 Puerperal sepsis ... ..	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30 Other puerperal diseases	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
31 Congenital debility, premature birth, malformations, etc.	8	3	...	...	1	...	1	...	2	...	2	...	...	...	1	...	1	1	1	3	1	...	...	...	...	...	
32 Senility ... ..	3	6	2	3	4	5	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
33 Suicide ... ..	3	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
34 Other violence ... ..	9	3	...	...	2	2	...	...	...	...	...	1	...	1	3	...	...	...	4	3	10	...	...	...	...	...	
35 Other defined diseases	16	10	1	2	1	...	4	2	...	...	4	2	1	1	2	4	4	2	2	6	7	...	...	...	...	...	
36 Causes ill-defined or unknown	1	4	...	...	...	...	...	...	...	2	...	...	...	...	2	1	...	1	1	1	1	...	...	...	...	...	
Deaths of Infants under 1 year	9	4	...	...	1	...	3	...	2	...	2	...	...	...	1	...	2	2	2	4	4	...	...	...	...	...	
{ Legitimate	8	4	...	...	1	...	3	...	...	...	...	...	...	...	...	...	2	2	2	4	4	...	...	...	...	...	
{ Illegitimate	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Live Births	248	227	14	9	33	22	31	21	28	37	30	7	8	32	32	33	31	31	96	95	154	155	15	18	719	687	
{ Legitimate	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
{ Illegitimate	238	215	13	8	32	22	30	20	27	35	29	7	8	31	31	32	31	...	93	93	150	148	15	16	695	658	
Still-births	10	12	1	1	1	...	...	...	1	1	2	1	...	...	5	...	...	...	3	2	4	7	...	...	...	...	...
{ Legitimate	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
{ Illegitimate	8	...	...	...	3	...	1	1	1	1	1	3	...	...	5	...	3	2	2	2	6	...	...	...	...	...	
Population .. ..	33,650	2,257	3,671	2,257	3,076	4,484	4,395	3,671	3,076	4,484	2,728	4,423	4,507	14,890	26,180	3,439	107,700										

\* Includes 3 females who died from Diarrhoea (2 years and over).



CAUSES OF DEATH IN ADMINISTRATIVE AREAS.—RURAL DISTRICTS.

TABLE I. (b)

CAUSES OF DEATH.	Brackley R.D.		Brixworth R.D.		Daventry R.D.		Kettering R.D.		Northampton R.D.		Oundle and Thrapston R.D.		Towcester R.D.		Wellingborough R.D.		Aggregate of R.D.'s.	
	M.		F.		M.		F.		M.		F.		M.		F.			
	78	65	101	92	101	100	99	83	91	79	107	127	104	93	94	77		775
All Causes ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	716
1 Typhoid and paratyphoid fevers	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2 Measles ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 Scarlet fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4 Whooping cough ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 Diphtheria ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6 Influenza ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7 Encephalitis lethargica ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8 Cerebro-spinal fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9 Tuberculosis of respiratory system	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10 Other tuberculous diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11 Syphilis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12 General paralysis of the insane, tabes dorsalis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13 Cancer, malignant disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14 Diabetes ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 Cerebral hæmorrhage, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16 Heart disease ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17 Aneurysm ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18 Other circulatory diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19 Bronchitis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 Pneumonia (all forms) ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21 Other respiratory diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22 Peptic ulcer ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23 Diarrhoea, &c. (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24 Appendicitis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 Cirrhosis of liver ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26 Other diseases of liver, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27 Other digestive diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28 Acute and chronic nephritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29 Puerperal sepsis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 Other puerperal diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31 Congenital debility, premature birth, malformations, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32 Senility ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
33 Suicide ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
34 Other violence ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 Other defined diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
36 Causes ill-defined or unknown	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deaths of Infants under 1 year { Total ... .. Legitimate ... .. Illegitimate ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Live Births { Total ... .. Legitimate ... .. Illegitimate ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Still-births { Total ... .. Legitimate ... .. Illegitimate ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Population ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE II.  
CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE COUNTY OF NORTHAMPTON, 1937.

CAUSES OF DEATH.	Sex.	AGGREGATE OF URBAN DISTRICTS												AGGREGATE OF RURAL DISTRICTS											
		All Ages	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—	All Ages	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—
ALL CAUSES .....	M. F.	624 574	26 16	4 2	4 4	12 6	19 10	21 28	26 25	59 45	120 92	161 132	172 214	775 716	59 35	1 6	10 4	8 14	15 17	31 22	39 22	39 57	116 93	198 155	259 291
1 Typhoid and paratyphoid fevers ..	M. F.	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... 1	... ...	... ...	... ...	... ...	... 1	... ...	... ...	... ...	... ...	... ...	... ...
2 Measles .....	M. F.	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	1 ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
3 Scarlet Fever .....	M. F.	... 1	... ...	... ...	... 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	2 ...	... ...	... ...	1 ...	... ...	1 ...	... ...	... ...	... ...	... ...	... ...	... ...
4 Whooping cough .....	M. F.	1 3	... 3	... ...	1 ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	3 1	1 ...	... ...	2 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
5 Diphtheria .....	M. F.	... 2	... ...	... ...	... 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	2 4	... ...	... ...	1 1	1 3	... ...	... ...	... ...	... ...	... ...	... ...	... ...
6 Influenza .....	M. F.	19 26	... ...	... ...	... ...	... 2	... 1	... ...	2 2	3 2	3 5	7 5	4 9	37 27	... 1	... ...	1 ...	... ...	1 ...	... 4	3 1	3 4	10 5	9 4	10 8
7 Encephalitis lethargica .....	M. F.	2 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	1 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	1 ...	... ...
8 Cerebro-spinal fever .....	M. F.	... 1	... ...	... 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	1 1	... ...	... ...	... ...	... ...	1 ...	... ...	... ...	... ...	... ...	... ...	... ...
9 Tuberculosis of respiratory system	M. F.	33 26	... ...	1 ...	1 ...	... 6	6 12	... ...	4 6	7 ...	7 2	... ...	... ...	20 15	... ...	... ...	... ...	... ...	... 3	7 3	4 4	3 2	4 2	2 1	... ...
10 Other tuberculous diseases .....	M. F.	7 4	2 ...	... 1	... ...	2 2	1 ...	... 1	1 ...	1 ..	... ...	... ...	... ...	8 9	2 1	... 1	1 ...	... 1	3 1	2 ...	... 1	... ...	... ...	... 2	... 1
11 Syphilis .....	M. F.	... 3	... ...	... ...	... ...	... ...	... 1	... ...	... 2	... ...	... ...	... ...	... ...	... 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... 1
12 General paralysis of the insane, tabes dorsalis .....	M. F.	2 ...	... ...	... ...	... ...	... ...	1 ...	... ...	... ...	1 ...	... ...	... ...	... ...	1 ...	... ...	... ...	... ...	... ...	... ...	... ...	1 ...	1 ...	... ...	... ...	... ...
13 Cancer, malignant disease .....	M. F.	84 83	... ...	... ...	... ...	... ...	1 2	... ...	2 2	8 11	23 16	31 28	19 24	91 87	... ...	... ...	... ...	... ...	1 ...	2 ...	4 1	6 12	21 20	37 29	20 25
14 Diabetes .....	M. F.	8 15	... ...	... ...	... ...	... ...	... 1	... ...	... 1	... 1	2 4	6 5	... 3	7 10	... ...	... ...	... ...	... ...	... 1	... ...	... ...	... 1	2 4	3 2	... ...
15 Cerebral hæmorrhage, etc.....	M. F.	45 41	... ...	... ...	... ...	1 ...	... ...	... ...	... ...	2 2	9 12	16 11	17 16	44 39	... ...	... ...	... ...	... ...	... ...	... ...	1 2	10 6	12 11	21 20	... ...
16 Heart disease .....	M. F.	160 155	... ...	... ...	... ...	... 1	... 2	... ...	5 3	13 10	34 20	41 47	62 72	178 197	... ...	... ...	... ...	... 1	1 4	2 2	3 7	6 12	28 24	65 52	73 95
17 Aneurysm .....	M. F.	1 ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	1 ...	... ...	... ...	... ...	4 1	... ...	... ...	... ...	... ...	... ...	... ...	1 ...	... ...	2 1	1 ...	... ...
18 Other circulatory diseases .....	M. F.	33 31	... ...	... ...	... ...	... ...	... ...	... ...	... ...	2 1	1 4	14 4	16 22	51 32	... ...	... ...	... ...	... ...	... ...	... ...	1 ...	... ...	6 2	15 11	29 19





CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1937.  
(52 weeks ended 1st January, 1938)

TABLE III.

DISEASES.	URBAN DISTRICTS.												RURAL DISTRICTS.									Totals for Administrative County	
	Brackley (Borough)	Daventry (Borough)	Higham Ferrers (Boro')	Burton Latimer	Desborough	Irthlingborough	Kettering	Oundle	Raunds	Rothwell	Rushden	Wellingborough	Totals for Combined Urban Districts	Brackley	Brixworth	Daventry	Kettering	Northampton	Oundle and Thrapston	Towcester	Wellingborough		Totals for Combined Rural Districts
†Small Pox ...	1	2	6	2	3	5	44	2	8	3	7	39	122	22	23	17	26	19	6	24	10	147	269
†Scarlet Fever ...	—	—	—	1	—	—	—	1	1	—	4	7	14	1	26	21	6	—	—	—	2	56	70
†Diphtheria ...	—	—	—	—	—	—	—	—	—	—	1	1*	8	—	—	—	—	—	—	—	—	3	11
†Enteric Fever ...	—	—	—	1	—	—	8	—	—	—	1	2	13	—	1	2	5	—	—	—	5	16	29
†Puerperal Pyrexia ...	—	—	—	—	—	—	1	—	—	—	—	1	3	—	1	—	—	—	—	—	—	1	4
†Puerperal Fever ...	—	—	1	—	—	—	1	—	—	—	—	1	42	2	—	4	4	4	3	1	6	24	66
†Erysipelas ...	—	1	3	2	2	3	12	1	3	—	7	8	37	114	2	5	28	12	7	8	8	75	189
†Pneumonia ...	1	2	6	9	1	7	17	3	5	2	24	2	6	2	—	—	1	4	1	1	2	9	15
Ophthalmia Neonatorum ...	—	—	—	—	—	—	1	—	—	—	—	—	2	—	—	—	1	1	—	—	—	3	5
Cerebro-Spinal Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis of the Respiratory System ...	—	1	—	—	8	4	21	—	5	4	12	22	85	2	15	9	11	12	15	4	14	82	167
Other Forms of Tuberculosis ...	—	—	1	—	—	—	13	—	1	3	4	3	26	5	6	4	7	4	5	7	6	44	70
Acute Poliomyelitis ...	—	—	—	—	—	—	—	—	—	—	1	1	2	—	—	—	—	—	—	—	—	—	2
Encephalitis Lethargica ...	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	1	—	—	—	—	1	2
Dysentery ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1
Totals ...	3	11	18	18	15	23	121	8	24	12	62	123	438	34	77	62	91	58	42	52	46	462	900

FACTORY AND WORKSHOP ACT, 1901.

DISTRICTS	Number of Inspections			Nuisances under the Public Health Acts, including those specified in Sections 2, 3, 7, and 8 of the Factory & Workshop Act, 1901, as remediable under the Public Health Acts.								Offences under the Factory and Workshop Acts.		
	Factories (including Factory Laundries)	Workshops (including Workshop Laundries)	Workplaces (other than Out-workers' premises)	Want of Cleanliness	Want of Ventilation	Overcrowding	Want of Drainage of Floors	Other Nuisances	Sanitary Accommodation			Illegal Occupation of Underground Bakehouse (S.101)	Other offences (excluding offences relating to out-work and offences under Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops, Transfer of Powers) Order, 1921.)	
									Insufficient	Unsuitable or Defective	Not separate for sexes			
URBAN.														
*BRACKLEY (Borough) ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
DAVENTRY (Borough) ... ..	39	105	27	...	...	...	...	...	...	...	...	...	...	...
*HIGHAM FERRERS (Borough)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
BURTON LATIMER ... ..	...	23	...	...	...	...	...	...	...	...	...	...	...	...
DESBOROUGH ... ..	24	6	...	2	...	...	...	...	...	1	...	...	...	...
IRTHLINGBOROUGH ... ..	36	3	...	...	...	...	...	...	1	2	...	...	...	...
KETTERING ... ..	285	7	...	30	...	...	...	44	3	97	...	...	...	...
*Oundle ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
RAUNDS ... ..	31	2	...	...	...	...	...	5	...	1	...	...	...	...
*ROTHWELL ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
RUSHDEN ... ..	62	17	1	4	...	1	1	1	2	39	...	...	...	...
*WELLINGBOROUGH ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Combined Urban Districts ...	477	163	28	36	...	1	1	50	6	140	...	...	...	...
RURAL.														
*BRACKLEY ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*BRIXWORTH ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
DAVENTRY ... ..	8	87	...	45	...	...	...	...	1	...	1	...	...	...
KETTERING ... ..	23	44	21	8	...	1	1	3	...	2	...	...	...	...
*NORTHAMPTON ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Oundle & Thrapston ... ..	67	34	...	...	...	...	...	...	2	...	...	...	...	...
TOWCESTER ... ..	...	14	...	3	...	...	...	...	...	...	...	...	...	...
*WELLINGBOROUGH ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Combined Rural Districts ...	98	179	21	56	...	1	1	3	3	2	1	...	...	...
Administrative County ...	575	342	49	92	...	2	2	53	9	142	1	...	...	...

\* Returns not received.

Written notices were issued as follows :—

In respect of factories : Desborough U. 3 ; Irthlingborough U. 3 ; Kettering U. 61 ; Raunds U. 1 ; Rushden U. 20 ; Daventry R. 4 ; Oundle and Thrapston R. 1.

In respect of workshops : Rushden U. 3.

In respect of workplaces : Rushden U. 1.

The defects enumerated above were remedied, except Kettering U. 28 ; Raunds U. 2 ; Oundle and Thrapston R. 1.

There was one instance of outwork in unwholesome premises (Section 108) in Kettering Urban District ; this was remedied.









